Quality of life in Bangladesh : an exploration of women's goals and goals satisfaction

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QUALITY OF LIFE IN BANGLADESH: AN EXPLORATION OF WOMEN'S GOALS AND GOALS SATISFACTION

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LIST OF COMMONLY USED ABBREVIATIONS

BIGS	Bangladesh Individualised Goal Satisfaction
BUGS	Bangladesh Unweighted Goal Satisfaction
BWGS	Bangladesh Weighted Goal Satisfaction
DUGS	Urban (Dhaka) Goal Satisfaction
EFA	Exploratory factor Analysis
IGS	Individualised goal satisfaction
PAF	Principal axis factoring
QoL	Quality of Life
RUGS	Rural (Sylhet) Unweighted Goal Satisfaction
SWLS	Satisfaction with Life Scale
UGS	Unweighted Goal Satisfaction
WeD	Wellbeing in Developing Countries Project
WHO	World Health Organisation
WGS	Weighted goal satisfaction

LIST OF ORGANISATIONS

BRAC: An international development organisation based in Bangladesh.

FIVDB: Friends in Village Development, Bangladesh: A development organisation based in Bangladesh

ICDDR,B - Centre for Health and Population Research:

An international health research organisation located in Dhaka, Bangladesh.

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ABSTRACT

Bangladesh's people reportedly enjoy levels of life satisfaction and happiness that are higher than other more 'developed' countries. In spite of impressive gains in several human development indicators and consistent GDP growth during the last two decades life satisfaction levels in Bangladesh have declined. This suggests that development initiatives focussed on improve material wellbeing may have a limited impact on individual wellbeing, and that non-material and social factors are of importance.

Development agencies have prioritised the empowerment of women and the promotion of gender equality. Women are a group for whom the social, cultural and economic transformation that is occurring in the country, has resulted in significant shifts in opportunities and roles. A better understanding of women's goal priorities and attainment in different contexts will aid the design of more effective interventions for enhancing women's wellbeing and evaluating their impact.

The main objectives of this thesis are to develop and validate a socially and culturally relevant, individualised measure of perceived or subjective quality of life (QoL), the Bangladesh Goal Attainment (BGA) instrument, for women aged 20 to 45 years in Bangladesh. Subjective quality of life or QoL is defined as "the outcome of the gap between people's goals and perceived resources, in the context of their culture, values, and experiences of un/happiness"(Woodcock et al., 2008). The BGA instrument consists of an expansive list of goals which respondents rate in terms of satisfaction (using a five-point scale) and necessity (using a four-point scale). Three hundred and ninety-nine respondents in a rural site, and 394 in an urban site completed the BGA by interview.

Psychometric validation, to derive composite measurement scales to assess perceived QoL of women in different settings in Bangladesh, used frequency distributions, exploratory factor analysis (EFA), and Cronbach's alpha. This resulted in a six sub-scale Bangladesh Goal Satisfaction measure (applicable in rural *and* urban settings), and specific rural and urban measurements scales (four and five sub-scales, respectively). Each sub-scale measures a dimension of perceived QoL relevant to the women that it is being administered to.

The Bangladesh Goal Attainment (BGA) instrument is the first multidimensional and standardised instrument to have been developed, to measure the perceived QoL of women in Bangladesh with different socio-economic characteristics and across different locations. The development of the BGA also represents the first detailed study of goal attainment and goal priorities for women, in two very different contexts in Bangladesh.

1. INTRODUCTION

The main objectives of this thesis are to develop and validate a socially and culturally relevant, individualised[1] measure of perceived or subjective quality of life (QoL), the Bangladesh Goal Attainment (BGA) instrument. Subjective quality of life or QoL is defined as "the outcome of the gap between people's goals and perceived resources, in the context of their culture, values, and experiences of un/happiness" (Woodcock et al., 2008, p. 95).

The target population group (women aged 20 - 45 years) is of interest as they represent a group who being of working and reproductive age, are often the target of development programs. They are also a group for whom the social, cultural and economic transformation that is occurring in the country has resulted in a significant shift in opportunities and roles, as I discuss later in this chapter. Improved understanding of their wellbeing achievements, and their goal priorities will aid development practitioners in the design of effective interventions.

1.1 WHAT IS THE BANGLADESH GOAL ATTAINMENT (BGA) INSTRUMENT?

The BGA instrument is a multi-dimensional profile measure of wellbeing applicable to women aged between 20 and 45 years of age, residing in different locations and contexts in Bangladesh. It provides a detailed assessment of women's goal priorities and goal attainment within the changing context of Bangladesh. This is of relevance to those wanting to evaluate the impacts, intended or otherwise, of interventions, and to design more effective and appropriate interventions. As a multidimensional measure, the BGA is distinct from dominant approaches to subjective wellbeing which focus on summative measures of happiness or life satisfaction (e.g. how happy are you with your life as a whole?) which are both abstract and removed from the details of people's lives. The pilot BGA instrument consisted of 73 goals[2] (see Table 12), which the respondents were required to rate using two scales (i.e. in terms of satisfaction and importance)[3].

[1] Individualized approaches seek to capture individual variability. The Bangladesh Goal Attainment instrument incorporates a weighting step in which respondents rate areas of life in terms of how important they are in terms of their wellbeing i.e. to live in happiness and peace.

[2] The rural instrument contains 73 goal items, an additional item (cooking facilities) was added to the urban instrument during fieldwork.

[3] Goal satisfaction ratings are scored using a five-point scale with responses ranging from 0= 'not at all satisfied' to 4= 'completely satisfied'; goal importance ratings are scored using a four-point scale with responses ranging from 0= 'not at all necessary' to 3= 'very necessary'. A weighted goal satisfaction score is obtained by multiplying the satisfaction rating by the corresponding importance rating..

Exploratory factor analysis (EFA) of the goal satisfaction data was conducted to derive composite measurement scales to assess perceived QoL of women in different settings in Bangladesh. This resulted in a six sub-scale Bangladesh Goal Satisfaction scale comprising 45 goal items applicable to women in rural and urban settings, and specific rural and urban scales (consisting of four and five sub-scales, respectively). Each sub-scale measures a dimension of perceived QoL relevant to the women that it is being administered to.

1.2 RATIONALE

1.2.1 BANGLADESH AND ITS WOMEN: WHY THE STUDY OF WELLBEING IS OF INTEREST

There are several reasons why the study of wellbeing in Bangladesh is of interest. Bangladesh, which aspires to achieve middle-income status by 2021 (Muzzini and Aparicio, 2013), was until recently one of the world's poorest and most densely populated countries. It is also a nation that experiences frequent natural disasters (Gray and Mueller, 2012), and considered to have high levels of corruption and weak governance (Khan and Islam, 2014, 2015). Against this backdrop, Bangladesh's citizens reportedly enjoy levels of life satisfaction and happiness that are higher than other more 'developed' countries (Camfield et al., 2007). However, despite impressive progress in several human development indicators and consistent GDP growth exceeding 6% during the decade leading up to 2014 (World Bank, 2014), life satisfaction levels in Bangladesh have declined. These findings indicate that aside from economic or material factors, there are non-material and other social factors that are important for individual wellbeing in Bangladesh.

Development agencies have prioritized the empowerment of women and the promotion of gender equality as a means of achieving wider development objectives, more recently guided by the targets of the Millennium Development Goals (MDGs)[4]. In Bangladesh, achievements included improvements in health and initiatives to enable women to exercise greater economic autonomy, which have led to declines in poverty and improvements in gender equality, particularly in rural settings. However, even with the greater opportunities for employment and micro-finance programmes open to women, women's incomes have risen less slowly than that of men (Kapsos et.al., 2008). In addition, there is compelling evidence that initiatives aimed at improving women's lives may have had unforeseen detrimental impacts on other aspects of women's lives, for example, vulnerability to spousal violence,

[4] The MDGs were a set of eight commitments (adopted in 2000) to reduce poverty and hunger, and to improve health, education, water and sanitation by 2015. These commitments provide the benchmark against which the world's governments asked to be judged when they were adopted in 2000

which are not captured by conventional objective indicators[5], but could potentially be captured by a measure such as the BGA.

1.2.2 THE NEED FOR A CONTEXT AND GENDER SPECIFIC MEASURE

To date there are few examples of subjective QoL measures developed specifically for use in developing settings, or indeed Bangladesh. Several health related QoL measures have been translated and adapted for use, with limited success. There is a need for development focussed subjective QoL measures, i.e. measures that are both suitable for use in developing countries and likely to capture the aspects of people's lives that might change through development programmes.

The dominant methodologies used to assess poverty or wellbeing i.e. household level surveys (which tend to only ask the male household head) mean that differences between genders (and generations) within a household are often lost in the aggregated data. A further issue with existing measures is that they are modelled on a tacit assumption of male actors, and the male perspective on ideas of agency and wellbeing.

Experiences of poverty and gender are inextricably linked. The socio-cultural context has a greater influence on women's experiences of poverty and ill-being, than that of men, suggesting that its study and measurement requires a separate approach. The importance of studying both poverty and wellbeing from a gender perspective has been recognised since the 1990s (Kabeer, 1991, 2015). Although there is greater acknowledgement of the feminisation of poverty in Bangladesh, there is a need to better understand the relationship between female gender and vulnerability to poverty. Attempts to study poverty through a gender lens have primarily sought to determine whether women are more likely to experience poverty than men and whether women's poverty and their experience of this poverty is more severe than that of men (for example, due to reduced social networks). Due to the difficulty of isolating the experiences of women within a household, as discussed earlier, the main approach evident in the literature has been to measure the incidence of poverty among female-headed households compared to that of male headed counterparts, in effect conflating the experience of women's poverty with that of female headed households (Chant, 2003).

[5] The oft cited example is that of women facing increasing levels of violence within their homes, after taking microcredit loans; it is common for the loans to be passed on to spouses or other male members of the family. Women under pressure to repay the loans to the microcredit group are forced to negotiate with spouses leading to disputes (Goetz and Gupta, 1996). Conversely, Kabeer (1991) in a qualitative analysis, reported that micro-credit loans results in an improvement in women's perceptions of their position in the household and social relations.

Other smaller scale studies, employing qualitative methodologies, indicate that there are clear differences in the way men and women conceptualise wellbeing and illbeing (e.g. Camfield et al., 2009). The nature of poverty and gender inequality is determined by the economic, social and ideological context. In Bangladesh, rigid authority systems and asymmetries within households means that there are significant gender and generational inequalities within families. Traditional patriarchy is manifested in the differentiated access to the resources of the household, worsening women's position; this will be even more evident in poorer households where resources are scarcer (e.g. Amin, 1997; Kabeer, 1997). Another aspect where the stronghold of patriarchy is evident is the traditional division of labour; this confines many women's roles to unpaid reproductive labour, including caring for children and the elderly, whilst men's roles entail paid production activities (Kapsos et al, 2008).

Individual level measures of wellbeing have also been overly influenced by male perspectives on what wellbeing means and consists of. The individual level measure of subjective QoL developed by the Wellbeing in Developing Countries Project, the WeDQoL (on which the BGA is modelled), aimed to capture the differing perspectives of individual men and women by incorporating an importance rating for the constituent items in the computation of wellbeing scores (Woodcock et al., 2008). However, in the first instance the content of the Bangladesh WeDQOL measure was slanted towards goals and resources considered important by men, including items which were related to the wider community and aspects of the environment beyond that of the immediate home and family circle[6,7].

There are considerable regional differences in Bangladesh, which are manifested in socio-cultural, linguistic and development differences. These regional differences pose problems when considering the development of a 'universal' Bangladesh wellbeing measure (even a gender specific one) or indeed the application of adapted measures developed outside of Bangladesh. The approach of the Bangladesh Goal Attainment (BGA) instrument is to acknowledge these regional differences by working in both the central Dhaka and North-Eastern Sylhet divisions, together comprising 46.5 million of Bangladesh's 142 million population, according to the 2011 census. It also spans rural and urban locations, thus aiming

[6] This may have arisen from the design of the qualitative study which informed the items included in the WEDQoL. In focus group discussions and individual interviews respondents were asked to list the characteristics of a person, a family and a living well. They were also asked to list the attributes of an ideal village/ community.

[7]There are similar grounds for developing corresponding scales for other population groups (defined by age and gender|). The development of the BGA scale serves as a model which can be followed to develop measures for other population groups of interest (e.g. differentiated by gender, age, location etc.).

to be relevant to the concerns and aspirations of women with respect to the material, social and cultural context of their particular location in Bangladesh.

1.3 HOW WAS THE BGA DEVELOPED AND VALIDATED?

The steps followed in the development and the validation of the BGA instrument are guided by the procedures followed for the development of psychometric scales and health-related quality of life measures (e.g. DeVellis, 2003; Hinkin et al., 1997).

The pilot BGA instrument consists of a list of goals, relevant to women aged 20 to 45 years of age, which respondents are required to respond to in terms of necessity (four-point scale) and satisfaction (five-point scale). The list of goals was developed from a review of relevant review and the analysis of qualitative data collected by the author. The use of the literature review and qualitative methods to derive and test items for inclusion in the instrument was vital to explore local understandings of wellbeing, specifically the perspectives of women in terms of their goal priorities and wellbeing achievement. The overall approach of the development of the BGA instrument, is consistent with attempts to counter traditional biases in research and develop methodologies that are consistent with feminist ideals.

The pilot BGA was administered in two sites: a rural site in a north-eastern district, Sylhet; and an urban slum area in Dhaka, the capital. Neither site can be described as an example of a 'typical' rural or urban site. However, these two sites do represent settings where the processes of urbanization, and increasing connectedness occurring in Bangladesh, have impacted upon women's opportunities, and priorities in very different ways. Development and field testing of the BGA in these different settings was conducted to demonstrate its suitability for use in different settings in Bangladesh. That is, to demonstrate that it can address the specific concerns of different women living in very different circumstances in Bangladesh. 399 in the rural site, and 394 in the urban site completed the BGA by interview.

The process of psychometric validation used frequency distributions, exploratory factor analysis (EFA), and Cronbach's alpha[8] to derive composite measurement scales to assess perceived QoL. Exploratory factor analysis (EFA) reduced the goal satisfaction data to a smaller set of factors or sub-scales. Each sub-scale is comprised of a group of related goals that represents a dimension of perceived QoL such as material wellbeing. This resulted in a six sub-scale Bangladesh Goal Satisfaction measures (applicable in rural *and* urban settings), and specific rural and urban measures (four and five sub-scales, respectively). Satisfaction

[8] Cronbach's alpha is a measure of internal consistency, or scale reliability, and indicates how closely related a set of items are as a group. It is based on the correlations between different items in the group.

scores for the items in each sub-scale were summed to produce a score, which is the measure of satisfaction in relation to a dimension of QoL. Kruskal-Wallis, Mann-Whitney U, tests were used to explore socio-demographic, geographic and economic differences in sub-scale scores for further validation.

1.4 CONTRIBUTIONS OF THE THESIS

The main contribution of the thesis is methodological in that its objective is to develop and validate a multi-dimensional measure of perceived quality of life (QoL). In achieving this aim the thesis makes further methodological, empirical and conceptual contributions.

Empirically, the development of the Bangladesh Goal Attainment (BGA) instrument represents the first detailed study of goal attainment and goal priorities for women, in two very different contexts in Bangladesh.

Methodologically, as the BGA includes a wide range of aspects of life, which go beyond the purview of many projects, it can be used to compare goal satisfaction and goal priorities for individuals and groups at a particular point in time, or track changes over time, including as the result of an intervention or service provision. This data is of use to development practitioners and service providers for several reasons:

- To identify prioritized QoL goals, and assess satisfaction with goals
- To determine whether the impact of a policy or intervention has been beneficial or detrimental in terms of goal satisfaction.
- To identify population groups or areas with low goal satisfaction, to target with particular interventions. Conversely, identifying groups or areas experiencing high goal satisfaction and understanding the factors underpinning this can guide the development and setting of interventions.

It also addresses a perennial methodological concern around the value (or otherwise) of weighting QoL measures and developing population-specific rather than generic measures.

Finally, the thesis makes conceptual contributions by deriving models of local understandings of wellbeing for particular contexts in terms of dimensions of perceived QoL for women aged 20-45 years in different settings in Bangladesh.

1.5 ORGANISATION OF THE THESIS

In Chapter 2, I present an overview of the emergence of wellbeing and quality of life, and the rising interest in subjective[9] accounts of wellbeing, as a complement to traditional income based indicators for evaluating social progress and public policy in contexts of poverty and material deprivation. I introduce the ESRC Wellbeing in Developing Countries Projects (WeD), at the University of Bath. The WeD Project made an important contribution by developing a framework for understanding and conceptualising wellbeing so that it could be useful to development practitioners. My own involvement in the development of the WeD Projects measure of subjective QoL, the WeDQoL, laid the groundwork for this thesis. I also discuss the approaches to understanding wellbeing which informed the WeD framework.

Chapter 3 discusses the conceptualization of wellbeing put forth by the WeD group as encompassing a subjective evaluation of peoples objective circumstances i.e. 'how people think about what they have and can do' (Abeyasekera and White, 2014, p. 10). In the same chapter, I also introduce the different ways in which subjective evaluations of wellbeing have been conceptualised, and the subsequent operationalisation for measurement. An understanding of these different approaches is necessary in order to appreciate the significance and potential applications of the Bangladesh Goal Attainment (BGA) instrument. I also review the debate concerning the incorporation of importance weighting in QoL instruments. Finally, I review the adaptation, translation and application of existing QoL instruments, which have predominantly been developed in developed country contexts, and highlight the methodological issues that are relevant for the development of the BGA instrument.

In Chapter 4 I review the extensive body of research that has sought to identify the factors which have been found to be strongly associated, perhaps causally, with happiness or subjective wellbeing i.e. global, unidimensional conceptualisations of wellbeing. This review aids understanding of the diverse factors that may contribute to wellbeing (or indeed to ill-being).

In Chapter 5 I provide an overview of the steps followed in developing the BGA instrument and the subsequent analysis of data. I introduce the terminology relating to the various aspects of validity relating to measurement instruments, and discuss how these are being evaluated in relation to the BGA instrument during its development and data analysis. In the later sections of the chapter I give a detailed account of the actual development and field

[9] Objective wellbeing (OWB) is 'externally approved, and thereby normatively endorsed, non-feeling features of a person's life, matters such as mobility or morbidity'; subjective wellbeing (SWB) comprises the as 'feelings of the person whose wellbeing is being estimated' (Gasper, 2007, p. 85)

testing of the BGA instrument. This includes the development and refinement of the goal item content and the two rating scales (in terms of necessity and satisfaction). I then discuss the field-testing of the BGA instrument, which includes a description of the two sites, and the training of the research team. Ethical considerations and methodological issues encountered in the study sites are also discussed.

Chapter 6 is the first of two chapters in which the results from the statistical analysis of the goal importance and goal satisfaction data of the BGA instrument are reported and discussed. In addition to screening the data as part of the psychometric validation, this analysis provides insight into Bangladeshi women's experience of wellbeing through a detailed study of their goal attainment and goal priorities in two very different contexts in Bangladesh. I compare goal satisfaction and goal priorities between the two sites and offer some explanations for these differences with reference to the wider literature.

Chapter 7 presents the results of further analysis to derive composite measurement scales to assess perceived QoL of women in different settings in Bangladesh. Exploratory factor analysis (EFA) was used to reduce the goal satisfaction data to a smaller number of factors, or subscales. Each sub-scale is comprised of a group of related goals and represents a dimension of perceived QoL. The Bangladesh goal satisfaction measure consists of six- sub-scales, and the rural and urban goal satisfaction measures of four and five sub-scales, respectively. Each sub-scale measures a dimension of perceived QoL relevant to the women that it is being administered to. Kruskal-Wallis, Mann-Whitney U tests and multiple regression are used to explore socio-demographic, geographic and economic differences in subscale scores for further validation.

Chapter 8 considers the role of education by drawing upon the literature and qualitative findings to provide a more nuanced understanding of how different groups of women understand it as contributing to wellbeing.

Chapter 9 concludes the thesis with a discussion of the validity of the BGA instrument, and how it may be used be researchers and development practitioners. Further methodological, empirical and conceptual contribution made by the thesis are discussed. Limitations of the study and areas for further study are also considered

2 UNDERSTANDING WELLBEING

The chapter starts (2.1) with an overview of the emergence of wellbeing and quality of life, and the rising interest in subjective accounts of wellbeing, as a complement to traditional income based indicators for evaluating social progress and public policy. I then discuss what the construct of wellbeing, and subjective accounts of wellbeing, may offer to those interested in evaluating social development in developing contexts, characterised by high rates of poverty and material deprivation (2.2).

I introduce the ESRC Wellbeing in Developing Countries Projects (WeD) (2.3) which was a significant effort to improve understanding of how the construct of wellbeing could be operationalised to be made useful to development practitioners. The WeD Project is of significance as it laid the groundwork for this thesis: the development of a subjective quality of life measure the Bangladesh Goal Attainment (BGA) instrument.

The sections that follow (2.4) sketch the emergence in recent decades of approaches to improve the understanding and assessment of poverty and wellbeing. Several of these approaches informed WeD's and an understanding of these aids understanding of WeD's approach. Among the approaches that explicitly underpin the WeD framework are the Theory of Human Need (Doyal and Gough, 1991), and livelihoods approaches (specifically the Resource Profile Approach (RPA)(Saltmarshe, 2002)).

2.1 WIDENING THE AGENDA: MEASURING SOCIAL PROGRESS AND WELLBEING

Politicians and policy makers, particularly in developed countries, widely refer to the impact of policies on constituents and nations in terms of their 'quality of life' and wellbeing. The common theme running through such developments is the growing awareness of the limitations of standard measures of progress such as Gross Domestic Product (GDP) in the full assessment of societal advancement (Stiglitz et al., 2009). There is also increasing interest, internationally, in understanding and evaluating subjective human conditions; and the use of subjective data to supplement objective information, when evaluating social and economic performance (Diener and Suh, 1997; Veenhoven, 2002). As well as being important in identifying factors that contribute to wellbeing, accounts of subjective wellbeing are of value in policy evaluation where the impact of non-market outcomes are involved (Dolan et al., 2011; OECD, 2013).

While the terms wellbeing, happiness and quality of life are widely used, they are vague and difficult concepts to define. McGillivray and Clarke (2006, p. 3) explain that "concepts such

as quality of life, welfare, well-living, living standards, utility, life satisfaction, prosperity, needs fulfilment, development, empowerment, capability expansion, human development, poverty, human poverty, and, more recently, happiness or life satisfaction are often used interchangeably with well-being without explicit discussion as to their distinctness". What can be said is that each of these concepts are used to refer to whatever is assessed in evaluating an individual's life situation or 'being', and moreover that they should be measured subjectively.

In 2011 the United Nations General Assembly unanimously adopted the resolution "Happiness: towards a holistic approach to development", recognizing the pursuit of happiness as a universal goal; in 2012, March 20 was declared International Day of Happiness. There was also the release, in 2013, by the OECD, of a set of guidelines (OECD 2013) on the measurement of subjective well-being for use by national statistics offices. The development and implementation of large-scale national accounts of subjective wellbeing, as a complement to existing economic and social indicators undertaken by official statistical offices, has been encouraged to "derive a more comprehensive appreciation of people's lives"(Stiglitz et al., 2009, p. 10). All of these are examples of the endeavour towards indicators of subjective wellbeing that are as robust and comparable as GDP, when determining where, when, and for whom life is getting better.

Several governments had already incorporated subjective measures of wellbeing in national censuses some considerable time ago, e.g. Canada has been collecting survey data on life satisfaction for over 30 years, and subjective wellbeing data has also been collected routinely in Australia and New Zealand for over 10 years (OECD, 2013). There also exist several organisations both academic and commercial that gather subjective wellbeing data internationally. A forerunner is the World Values Survey (WVS) dating back to 1981; the European Social Survey (ESS) has collected data on life satisfaction since 2004; and lastly the influential Gallop World Poll initiated in 2005 is conducted in in over 160 countries including 99% of the worlds adult population. In 2011 the UK's Office for National Statistics (ONS) added four measures of subjective wellbeing to their surveys[10].

Other approaches have adopted a multi domain approach. In the early 1970s, Bhutan sought an alternative philosophy to the dominant paradigm of gauging progress in terms of material

[10] Subjective wellbeing questions are included in the ONS's annual UK Household Survey, which is a large population sample (165,000 adults, aged 16 and over). Respondents are required to rate their response on a scale from 0 to 10, where 0 is not at all and 10 is completely to the following questions: 1) overall, how satisfied are you with your life nowadays? 2) overall, to what extent do you feel the things you do in your life are worthwhile? 3 overall, how happy did you feel yesterday? 4) overall, how anxious did you feel yesterday?

advancement, this resulted in the development of the Gross National Happiness Index (GNH)[11] (Ure et al., 2012). The GNH sought to consider the spiritual, physical, social and environmental health of its people and the natural environment. More recently, since the publication of the OECD guidelines (OECD, 2013), subjective wellbeing data in the form of the Better Life Index (Durand, 2015; Mizobuchi, 2014) is being collected in 35 countries which include the world's most developed economies and several emerging economies. The Better Life Index[12] includes 11 domains of wellbeing, under the headings of 'material living conditions' and 'quality of life'.

2.2 ACHIEVING DEVELOPMENT AND SOCIAL PROGRESS: WHAT COULD WELLBEING OFFER?

The aim of social and economic development has long been that the lives of people around the world should be improved. In the developed world the interest in alternative measures of wellbeing, such as happiness and life satisfaction came about, in part, as a result of observations that growing prosperity (in the material sense) had not resulted in greater life satisfaction (Graham, 2011).

In developing countries, where people experience considerable material deprivation, it may seem inappropriate to be concerned with issues such as wellbeing. The traditional approaches to conceptualising and measuring poverty have been dominated by a focus on poverty or material deprivation in terms of incomes, productive assets, health and educational attainment and so on; commonly at the household level (McGillivray, 2007). There has been a growing realisation among the development community, that quantitative and household level money-metric measures of wellbeing are inadequate (ibid.). Findings from qualitative and participatory methodologies to poverty assessment shed light on how the poor conceptualise poverty, as a multidimensional construct, beyond that of material deprivation (Chambers 1996). The use of these methodologies have also aided understanding of the 'dynamic, structural and relational factors' that determine how material commodities are accumulated and distributed (Harriss, 2007, p. (i)).This has implications for the assessment of wellbeing of individuals within households. For instance, women may

[11] The philosophy underlying the GNH is that of sustainable development, preservation and promotion of cultural values, conservation of the natural environment, and the establishment of good governance. The GNH index is derived from 33 indicators categorized under nine domains: psychological well-being, standard of living, governance, health, education, community vitality, cultural diversity, time use and ecological diversity.

[12] The Better Life Index covers 11 areas which have been identified as being essential to wellbeing under the headings of material living conditions (housing, income, jobs) and quality of life (community, education, environment, governance, health, life satisfaction, safety and work-life balance).

experience poverty in 'non-poor' households as a result of gender and age based biases in the distribution of resources and opportunities (Cagatay, 1998).

The interest in subjective accounts of wellbeing has arisen from empirical findings indicating that poor people in developing countries are able to derive considerable satisfaction from certain aspects of their lives, and that the relatively non-poor are able to experience high levels of wellbeing (e.g. Biswas-Diener and Diener, 2009; Knight and Gunatilaka, 2012a). In addition, there is also evidence that, even in the most materially deprived contexts, people hope and aspire for themselves and their children, to lead better lives, beyond that of merely fulfilling their basic needs.

While the importance of meeting the basic needs of people cannot be denied, adopting a wellbeing approach invites practitioners to look beyond material deprivation. The interest in the wellbeing construct also reflects the growing appreciation for a more holistic understanding of wellbeing with reference to differing contexts; acknowledging the significance of different ecological systems (for instance the family system and macro socio-cultural system) in determining people's behaviour (McGregor et al., 2003).

The importance of adopting a wellbeing focus is evident when evaluating the impact of interventions. For instance, the impact of cash transfer interventions is largely deemed as successful on the basis of the gains to income, and in some cases human capital, while overlooking the impact on social relationships within and between households. More recent findings indicate that the impact of these transfers on social relationships has been found to be, by and large negative, which again has further material impact by affecting people's livelihoods (see MacAuslan and Riemenschneider, 2011 for a review). The use of broader subjective wellbeing assessments in such instances would be able to directly assess the impact of such interventions on people's wellbeing. In short, the use of wellbeing indicators enables a more comprehensive understanding of the needs of recipients and the impact of policies and programmes; while subjective assessments of wellbeing give us direct information regarding 'how people think about and experience their lives' (OECD, 2013, p. 3).

2.3 WHAT,THEN, IS WELLBEING? INTRODUCING THE WELLBEING IN DEVELOPING COUNTRIES PROJECT (WED)

Although the term 'wellbeing' is increasingly referred to in international development policy discourse, even being used as a synonym for development (Gough et al., 2007), there is little consensus over what it consists of. Numerous conceptualizations and definitions of wellbeing and quality of life abound; but there is agreement in that both constructs are understood as being concerned with what it means to 'live well' or for life to be good.

Gasper (2004: 13) posits that the concept of wellbeing indicates an evaluation of a person's situation, or more fittingly, an evaluation which is focussed on the quality of the person's 'being''. There is generally agreement that wellbeing is a multidimensional construct that consists of both objective and subjective components (Alkire, 2007), and that there is not always a strong correlation between the two. The subjective component consisting of the individuals' reports of what makes their lives good (satisfaction and or felt need fulfilment); while the objective generally consists of a list of requirements that need to be satisfied for a person to lead a good life. The various conceptualizations and definitions also recognize that what it means for life to be good will differ from individual to individual, as well as by location, gender, life-stage, and indeed personality (White, 2014).

White (2014) usefully lists several characteristics and advantages of wellbeing approaches, summarised below, which explain their appeal to development practitioners:

(i) They are multidimensional constructs encompassing more than just material or economic aspects;
(ii) They have a positive orientation, focusing on what people's strengths and resources, as opposed to poverty and deprivation;
(iii) A wellbeing approach is felt to be more inclusive as it encompasses ideas of participation and self-determination as opposed to an externally defined definition of wellbeing; and
(iv) They are personal and subjective, in that the impact on the participant and their relationships is the focus, and its effect is in terms of their personal experiences and perspectives rather than just objective outcomes.

A significant attempt to operationalise the construct of wellbeing, so that it could be useful to development practitioners, was that of the Wellbeing in Developing Countries Project Research Group (WeD) at the University of Bath[13]. The WeD sought 'to develop a conceptual and methodological framework for understanding the social and cultural construction of wellbeing' (Gough et al., 2007, p. xxii)., and conceptualised wellbeing as

> 'arising from the combination of: i. what a person has, ii. what a person can do with what they have, and iii. how they think about what they have and can do…'

[It] can be conceived in terms of the interplay of (rephrasing the three dimensions mentioned in the definition above):

[13] The ESRC funded project multi-country, inter-disciplinary study lasting 5 years (2002-2007) was based at the University of Bath, with collaborating country teams in four very different developing setting, in terms of their economic development and modernisation: Ethiopia, Bangladesh, Peru and Thailand.

i. the resources that a person is able to command;
ii. what they are able to achieve with those resources, particularly what needs and goals they are able to meet, and;
iii. the meaning that they give to the goals they achieve and the processes in which they engage (McGregor et al., 2007, p. 317).

White (2009) offers the following alternative nomenclature for the three aspects delineated by McGregor: the material, relational and subjective, which are elaborated as follows:

- The material dimension or *practical welfare and standards of living*: this encompasses human capital such as health and education, and assets (which consists of material, physical, natural and financial capital)
- The relational dimension or *personal and social relations*: this includes close intimate relationships, and social capital (in the form of social networks and interactions with state bodies e.g. law agencies, political affiliation, and social and welfare services)
- The subjective or values, perceptions and experiences: this consists of the individual's own perception of their situation, as well as their beliefs, ideologies and cultural values.

The material dimension, is expansive: as well as economic assets and income, it also includes food, shelter, the physical environment, health and education and so forth. The relational dimension concerns social interactions, access to services such as health and education; these need to be considered alongside social inequalities and divisions and the norms that determine who gets what and why (ibid). Although the material and relational dimensions are referred to as the 'objective' the WeD 's understanding of wellbeing also expands the concept of resources beyond the possession of physical objects (e.g. natural resources (land, water etc) and tools and equipment etc.) and includes the social and cultural meanings and implications which are attached to their possession (White and Ellison, 2007). The subjective involves socially and culturally defined values, beliefs and ideologies, as well as people's own perceptions.

White (2009) has illustrated the interdependent and dynamic relationship between the three dimensions in the form of a triangle (Figure 1), so that wellbeing emerges from the interplay of these three interdependent dimensions.

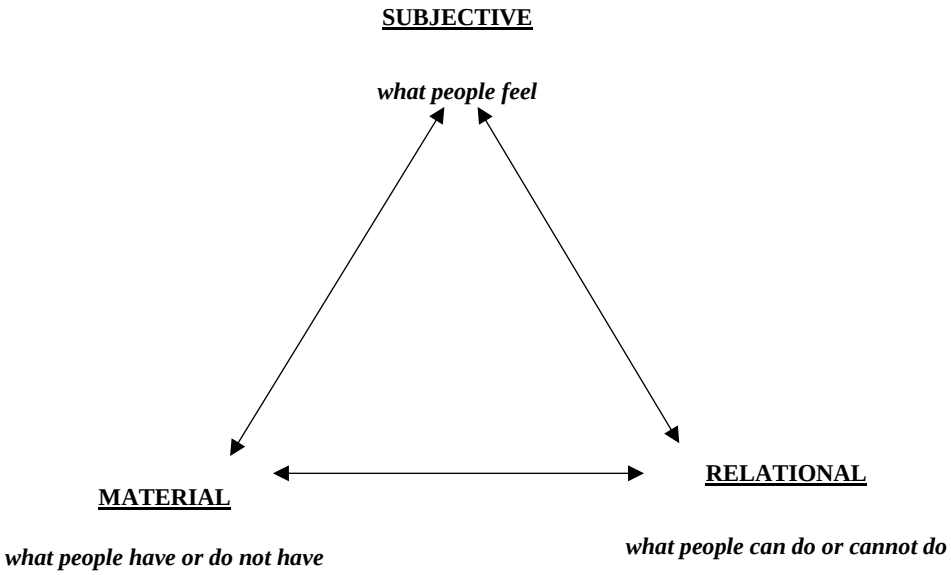

Figure 1. The interconnected and dynamic relationship between the three dimensions of wellbeing (adapted from White, 2009).

The material and relational dimensions constitute people's circumstances, and the subjective refers to their perception of their circumstances. To illustrate: people's perceptions, values and beliefs (the subjective), will influence what people feel they can do or be; and what people can do or can be will be influenced by people's experiences and circumstances (material) as well as culturally and socially determined norms and values (relational). It should also be noted that a person's 'objective' circumstances, do not necessarily predict how that person subjectively assesses their wellbeing.

The WeD's wellbeing framework thus addresses the shortcomings of traditional approaches to poverty analysis in which the social and cultural meanings of resources, and the social processes that contribute to the distribution and accumulation of resources are overlooked. The strengths of such an approach can be appreciated when assessing the situation of women (and children) for whom intra- household allocation of income and resources is an important dimension of their experience of poverty. In Bangladesh for instance, norms of patriarchy will dictate how resources are distributed within a household, and the opportunities available to women; in other words, women's experiences of wellbeing (and poverty) are more subject to the relational and subjective dimensions, than those of men.

In the remainder of this chapter I chart the emergence of different approaches to assessing wellbeing (and poverty) and discuss them in terms of their contribution to, and convergences with, the WeD framework.

2.4 IMPROVING THE UNDERSTANDING OF WELLBEING: ANTECEDENTS TO THE WED PROJECT

In this section I start by addressing the criticisms against the traditional use of economic indicators (such as the GDP) for assessing social progress and wellbeing (1.5.1). The understanding that the construct of wellbeing is multidimensional, encompassing all aspects of human life has contributed to initiatives to develop new approaches, which allow the consideration of wellbeing in a more holistic way. I will discuss several of these approaches (2.4.2 - 2.4.4), and highlight how they contributed to the conceptualisation of wellbeing espoused by WeD[14]. The discussion includes several bodies of work which were explicitly drawn upon during the development of the WeD's conceptual framework: the Theory of Human Need (Doyal and Gough, 1991), the livelihoods approaches (specifically the Resource Profile Framework (RPF) developed at the University of Bath (Saltmarshe, 2002), and work on subjective evaluations of wellbeing and quality of life (this aspect is discussed in detail in Chapter 3).

2.4.1 ECONOMIC PERFORMANCE: A FLAWED ASSESSMENT OF SOCIETAL WELLBEING

Previously the dominant focus of development efforts was economic development with the concomitant goals of achieving economic growth and reducing poverty. The rationale for this was that the material standards of living within a country, defined by measures such as GDP, denoted the wellbeing of its people. The use of GDP as a measure of societal wellbeing was based on several flawed assumptions. For instance it was assumed that the benefits from economic growth, which initially resulted in increases in the incomes of the richer segment of the population, would eventually 'trickle down', and result in increased incomes of poorer segments of the population and overall development (Grant, 1973). In turn the tacit assumption was that improvement in the material condition of the poor would lead to enhancements in wellbeing by providing them with greater means to meet physiological and security needs (Veenhoeven 1989; Diener et al. 1999; Hirata 2001).

Critics, on the other hand, have long emphasised that GDP is a measure of market production, and not economic or social well-being. While GDP may give an indication of the material standard of living within a country, it fails to take into account the distribution

[14]For a detailed account of the WeD's framework and its operationalisation of wellbeing the reader is directed to McGregor (2007) and Gough and McGregor (2007).

of economic benefits within that country (Burchardt, 2013). While economic growth may have a role in poverty reduction, it cannot be assumed that the poor are equipped with the capabilities to take advantage of expanding economic opportunities. In addition, it does not fully capture many aspects of human life that contribute to wellbeing; goods and services such as state provided health services, or households engaged in caring for the elderly or for children are not accounted for in GDP figures. Further criticisms of GDP as a wellbeing indicator are that activities which arise from factors which are in fact detrimental to human beings are recorded as positive achievement in GDP figures; for instance, infrastructure rebuilding after a natural disaster.

An example of how reliance on indicators of economic growth as a proxy for wellbeing can be misleading is provided by Dreze and Sen (2013); they compared India's advances in growth and social indicators during the period 1990 -2011 with those of Bangladesh. At the start of this period India's GDP per capita was already much higher than Bangladesh (GDP per capita[15] of 1,193 and 741 respectively); during this period India experienced economic growth which was much larger so that by 2011 its per capita GDP was about double that of Bangladesh (3,201 and 1,569 respectively). However, during that same period Bangladesh had surpassed India in terms of a wide range of basic social indicators. For instance, under-five mortality in 1990 was 114 (per 1,000) in India and 139 in Bangladesh; by 2011 this figure had dropped in both countries, but the rate of change was greater in Bangladesh (-93 vs. -53) so that by 2011 Bangladesh had a lower rate of under-five mortality (46 vs. 61 in India).

There is also a robust body of research which confirms that above a certain threshold, further increases in material wellbeing is in fact detrimental to wellbeing, impacting negatively on a wide range of aspects of life (including healthy relationships and social cohesion, leisure time, knowledge, the environment) and increasing income inequality (Max-Neef 1995; Talberth, Cobb et al. 2007). In a comprehensive and systematic cross-country and time-series study of the relationship between GDP growth and improvements in the objective indicators of wellbeing, it was found that there was only robust indication that GDP growth was the prime cause for the improvement in 3 out of possible 81 indicators (calorie intake, protein intake, and telephones) (Easterly 1999). In addition, the evidence indicated that growth in GDP was accompanied by rises in objective indicators of "bads" that lower quality of life, such as higher levels of pollution and, beyond a certain income threshold, dietary habits that increase obesity. Thus, growth in GDP is associated with the consumption of aspects that tend to lower wellbeing.

[15] PPP, constant 2005 international $.

2.4.2 FROM ECONOMIC DEVELOPMENT TO HUMAN DEVELOPMENT: BASIC NEEDS AND CAPABILITIES APPROACHES

Recognising that measures of income and poverty did not adequately measure human wellbeing, the human development approach emphasised that income was a ‘means’ to an end rather than the end itself. The United Nations Development Programme’s (UNDP) Human Development Reports, launched in the 1990s, argued that development efforts should be aimed towards achieving ‘human development’ rather than economic growth. Human development was defined as "the process of enlarging people's choices", said choices allowing them to "lead a long and healthy life, to be educated, to enjoy a decent standard of living", as well as enjoying ‘political freedom, other guaranteed human rights and various ingredients of self-respect’(United Nations Development Programme, 1997, p. 15).

One attempt to quantify some of the non-monetary aspects of development, has been the adoption of composite measures which aim to capture the multidimensional aspects of poverty beyond that of traditional income based poverty measures. These measures are usually constructed using different components, weighted in some way to form a single index. The most well-known and debated example of a multi-dimensional indicator is that of the Human Development Index (HDI) created in 1990, which is a weighted sum of three indicators of deprivation: income per capita (in PPP terms), life expectancy at birth, adult literacy and education enrolment ratios. Veenhoven (2004) criticises the HDI because it aggregates objective indicators of different categories (confusing ends with means) into a single index. Although far from a perfect measure of welfare, some of the HDI’s strengths lie in its simplicity and transparency (UNDP 2007). As an example of a composite indicator it has been important in bringing attention to non-income based measures of development for policy analysis. While of little value as a measure of overall wellbeing, Veenhoven (2007) does concede that the HDI is a useful measure of ‘catch-up’, in terms of providing a measure of how developing countries are performing with respect to selected markers which are characteristic of the best performing countries of the world.

Prior to the launching of the Human Development Reports there had already been a shift towards alternative measures that could more fully capture the non-economic dimensions of wellbeing. These initiatives echoed the growing dissatisfaction with GDP and economic growth as measures of successful development and human wellbeing. Two approaches that were influential to the understanding of development promoted by the UNDP are the basic needs approach (BNA) and the capabilities approach (CA). Both approaches had a focus of bringing people to the centre of development strategy, and both regard poverty to be a state of multiple deprivations: briefly, the basic needs approach (BNA) views poverty as ‘deprivation of consumption’ while the capability approach (CA) views poverty as ‘deprivation of opportunities’.

The BNA states that the satisfaction of a core set of basic needs should be the overriding objective of international development policy, stressing that income does not necessarily determine whether these needs are met (Gough et al. 2007). The appeal of the needs approach was that it was simple and easily understood: each need is a necessity, and meeting these needs provides the necessities for survival (basic needs) or in a more expansive definition, for a minimally decent life. The most basic level of needs dealt with by these approaches include food (nutrition), shelter, and health care and educational institutions.

In 2000, in response to the persistence of extreme poverty in many parts of the world, the needs approach was reaffirmed by the UN Millennium Development Goals (MDGs). The MDGs aimed to 'address the problems of extreme poverty in its many dimensions- income poverty, hunger, disease, lack of adequate shelter, and exclusion, while promoting gender equality, education, and environmental sustainability"(Sachs and McArthur, 2005, p. 347). The goals consisted of targets (with specified indicators) for the basic needs or human rights which should be fulfilled by people around the world including freedom from extreme poverty and hunger, access to quality education, access to safe drinking water and sanitation, enjoying good health and access to good health services, safe delivery for women, opportunity for productive and decent employment, gender equality and environmental sustainability.

Sen's work on capabilities provided impetus for an alternative paradigm for development thinking, moving the focus away from commodities to a broader perspective which was exemplified in the UNDP Human Development Reports (Sumner, 2006). Sen (Sen, 1984, 1999, 2001) had long criticised money-metric measures and needs approaches for confusing ends with means, explaining that a person's command over economic resources and commodities are inadequate as a measure of wellbeing. Rather we should be concerned with what a person is *actually able to do, or be*, with the particular stock of resources that they have, and the opportunities available to them (ibid). Sen pointed out that if the aim of development is to improve lives, an understanding of local meanings and values (i.e. culture), both as mechanisms and as ends is imperative (Sen, 2001); drawing attention to barriers that prevent people from availing opportunities to enjoy a good quality of life, and to do things that they value (Robeyns, 2008). Personal and social 'contingent circumstances' (Sen, 2001, p. 70) influence the ability of people to translate a given bundle of commodities into wellbeing outcomes. Physical and biological differences between human beings, as well as variation in their physical environment will mean that they will have different requirements of commodities in order for their needs to be met; the social arrangements within a context will define how incomes and commodities are transformed into wellbeing outcomes; differences in prevailing customs and habits will mean that there are differences in the commodities required for achieving the 'capability to appear in public without shame'

(Sen, 2001, p. 70); and lastly that within a households decisions (based on gender, age, or perceived need) will determine how incomes and commodities are distributed between members, and this will influence what individual members are able to achieve.

Expanding upon these ideas Sen developed a broad theoretical framework, the capabilities approach (CA), to assess a person's wellbeing (Sen, 1999). In the CA a person's wellbeing is evaluated in terms of the totality of 'beings' and doings' that they actually achieve i.e. their functionings. While the 'capabilities' of a person represent the alternative combinations of functionings that a person can achieve with the commodity set at their disposal. Functionings each have intrinsic value and include "being nourished", "avoiding premature mortality" (Sen, 1992, p. 39) or "being in good health", "being well-sheltered", "being educated" or "moving about freely" (Kuklys, 2005, p. 10). From a capabilities perspective, poverty is regarded as deprivation in certain basic capabilities, and these can vary; depending on the prevailing living standards within a particular context (Sen, 1984, pp. 84–85).

A person's wellbeing is then evaluated in terms of their capability to achieve personally and socially valued functionings (Sen, 1999). Sen went further by broadening the scope of a person's wellbeing so that it 'is not merely a matter of what he or she achieves, but also of what options the person has had the opportunity to choose from'(Sen, 1999, pp. 60–70); people will differ in their opportunities and abilities to convert a particular commodity into valued functionings as a result of the 'contingent circumstances' mentioned previously. Sen's approach is distinct in that it addresses the importance of considering the freedom that people are able to exercise in converting the resources available to them (both personal and public), including instrumental capabilities into other benefits (e.g. health or economic).

The importance of this is illustrated if we consider gender: gender discrimination will determine people's ability to convert income and other commodities into valued functionings. For instance, while universal provision of education access may mean that men and women are able to achieve the same educational qualifications, discrimination in the job market will impair a woman's opportunities to achieve the same functionings as her male counterpart. The expansion of people's choices, or their capabilities should then be the objective of development policy.

In contrast to the CA, the BNA while readily operationalised, is prone to being paternalistic in that basic needs are defined externally by 'experts'; the CA provides a broader evaluation emphasising people's choices and values, but this also makes it difficult to operationalise.

This is compounded by the fact that beyond a brief list of 'basic capabilities'[16], comparable to basic needs, Sen has refrained from specifying a fixed or definitive list of capabilities as this is contrary to the idea of having the freedom to choose, which is central to the CA[17]. Instead he stresses that the selection and weighting of capabilities should be determined by personal value judgements. In relation to assessing wellbeing, using the CA, the question of whether functioning or capabilities (in other words 'achievements' or 'opportunities'), should be considered when assessing wellbeing has been the subject of much debate. Sen advocates focussing on capabilities, i.e. of the full range of possible ways of life that a person can choose from, in line with his commitment that the CA should be anti-paternalistic, and so should not specify a particular account of what it means to live well. Sen's position is however difficult to operationalise, while actual functioning can be observed, the 'capability set' of a person includes 'not only the opportunities that people had actually chosen... but also the counterfactual opportunities that had been open to them that they had not chosen'(Gough and McGregor, 2007, p. 98) making it very difficult to capture.

To sum-up the BNA views poverty as consumption deprivation (in terms of food, nutrition, clean water, health, education etc.); while the CA views poverty in terms of deprivation in *opportunities* for people to lead lives that they *value*. The two approaches have very different policy implications. From a policy perspective, adopting a BNA approach entails providing the poor adequate access to an arbitrary, externally defined, minimum level of consumption so that they are able to achieve subsistence; adopting a CA focuses on developing the capacity and freedoms of people rather than how much they consume. For instance, taking the example of a project to provide safe water to the inhabitants of a village; using the BNA it would be evaluated in terms of the number of people or households having access to safe water, the CA's perspective would be wider, considering the opportunities that this would make possible, e.g. women who no longer need to collect and carry water for household use may be able to reallocate this time to income generating activities.

In common with wellbeing approaches, and the position espoused by WeD, the CA marked a shift to a more positive stance, focussing on what people *are* able to achieve, and their exercise of agency; rather than the negative focus on what people are deficient in taken by

[16] Sen suggests that basic capabilities can consist of elementary physical ones such as being well nourished, being adequately clothed and sheltered, avoiding premature morbidity and so forth, to more complex social achievements such as taking part in the life of the community, being able to appear in public without shame, and so on.

[17] Nussbaum (e.g. 2001) is the best known example of an attempt to complete the CA by developing a definitive list of human capabilities' that are of central importance in any human life, whatever else the person pursues or chooses.. This list as follows: (1) Life; (2) Bodily health; (3) Bodily integrity; (4) Senses, imagination and thought; (5) Emotions; (6) Practical reason; (7) Affiliation; (8) Other species; (9) Play; and (10) Political and material control over one's environment (Nussbaum, 2000, pp.72-5; 2003, pp.41-2; 2005a, pp.41-2).

the BNA. It also acknowledged that human beings within a particular collective be it a household, community etc. will differ in their experiences (depending on age, gender, status) and in their opportunities to pursue and achieve wellbeing. The WeD's approach builds on Sen's 'beings' and 'doings', by adding how people *'feel'* about their beings and doings, and the interaction between beings, doings and feelings.

Although the CA is an approach that had the aim of improving human wellbeing, the ultimate aim of which is to increase happiness and life satisfaction, it only focusses on objective (or material) aspects of wellbeing. In the early stages of its conceptual development the WeD project was concerned with bridging the gap between approaches, such as the CA, and subjective evaluations of wellbeing. Sen (1999) had earlier suggested that a person's quality of life be evaluated in terms of their capability to achieve personally and socially valued functionings (Sen, 1999); the WeD team proposed that this conceptualisation converged with 'gap theories' that have emerged from the health field where QoL derives from a gap between (health) expectations and reality. Reformulating Sen's conceptualisation of quality of life, members of the WeD derived a working definition of QoL as:

> 'the gap between capability reality and capability expectation'. (Ruta et al., 2007, p.3).

Ruta et al (2007) emphasise that any judgement of the 'gap' requires for this to be a subjective evaluation; as it is only the person living a particular life who is fit to judge it's quality; they are the only ones who can assess the gap between their perceived expectations and current reality (Nord, 2001). This definition underpinned the WeD's own measure of subjective quality of life the WeDQoL, and also underpins the BGA instrument. I discuss gap, or discrepancy theories of subjective wellbeing in more detail in Chapter 3, section 3.1.3.

2.4.3 THE THEORY OF HUMAN NEED (THN)

While Sen refrained from stipulating a list of basic capabilities, there have been many attempts to develop lists of basic needs, and functionings and so forth[18] (Alkire, 2002). The Theory of Human Need (Doyal and Gough, 1991), is one example, and was drawn upon explicitly by the WeD. The THN aims to provide a 'the gap between capability reality and capability expectation'' (Gough 2003).

The THN differentiates between two types of goals. The first category of 'basic needs' are defined as a particular category of universal goals relevant to all human beings to avoid

[18] Alkire (2002) provides a review which includes a summary of 39 'lists' and an analysis of 9 in more detail.

‘serious harm’, where harm is defined as ‘fundamental disablement in the pursuit of one’s vision of the good’ or ‘an impediment to successful social participation’ (Gough 2008, p 8). These basic needs are distinct from wants which are derived ‘from an individual’s particular preferences and cultural environment’ (Gough, 2004, p. 4) and are not associated with serious impairment if they are not fulfilled.

Doyal and Gough (1991) argue that human beings have ‘basic needs’ for physical health and ‘autonomy’, which are universal prerequisites for wellbeing. The necessity of health is obvious; in order to meaningfully act and participate people need to have a level of physical health. Human beings also require autonomy defined as ‘cognitive and emotional capacity’, explained further as ‘the level of cultural understanding a person has about herself, her culture and what is expected of her as an individual within it’(Doyal and Gough, 1991, p. 60); in other words being able to make informed choices about what should be done and how to go about doing it. The basic and universal needs of health and autonomy can be satisfied by a multitude of ‘satisfiers; the THN delineates *characteristics* of need satisfiers that are essential for improved physical health and autonomy, and indeed the full and effective participation of people.

These intermediate need satisfiers are categorised, resulting in 11 ‘intermediate needs’ as follows: nutritional food and clean water; protective housing; a non-hazardous work environment; a safe physical environment; safe birth control and child-bearing; appropriate health care; a secure childhood; significant primary relationships; physical security; and appropriate education. The THN acknowledges differences in local contexts by recognizing that in different social and environmental contexts these intermediate needs can be met in different ways e.g. thus the need for health is met partly through the satisfaction of the need for shelter, the satisfier of which will be different in a northern temperate climate than in a more southerly tropical climate. Moreover, Doyal and Gough (1991) assert that although personal goals and preferences will differ widely across cultures, particular needs do not have to be valued within a culture to have functional significance (Doyal and Gough, 1991).

There are several problems with the use of needs approaches, such as the THN, in conceptualising and evaluating wellbeing. In the case of the THN the understanding of ‘serious harm’ (Doyal and Gough, 1991) remain ambiguous. The THN goes some way by addressing cultural relativism and acknowledging that the satisfiers of intermediate needs will vary between social and cultural contexts. However, the THN does fully not account for inter-personal differences: an individual’s need priorities, and subsequent need satisfaction are determined by the goals that they are pursuing (Nordenfelt, 1994). Individual differences in priorities and goals are taken into account by subjective quality of life approaches to wellbeing.

The reliance on needs approaches for evaluating wellbeing does not explain why a person living in considerable poverty, with deficient need satisfaction, can report high levels of life satisfaction. Despite research findings that show that the extent to which people's needs are satisfied is related to their satisfaction with life (Oishi et al., 1999); other research findings show that the relationship between need satisfaction and perceived life satisfaction is less clear. For example, Biswas-Diener and Diener's (2001) study in which slum dwellers in Calcutta, with poor incomes and housing, reported higher levels of subjective wellbeing than expected. Levels of need satisfaction may depend on subjective judgements, which are influenced by psychological processes such as social comparisons. A person may have their basic needs and intermediate needs satisfied; but if they are relatively poor compared to the people around them (proximal reference groups), upward comparisons may lead them to rate their life as much worse than those around them. Conversely, the same person in a poorer area, with no change in the satisfaction of their needs, may rate their life as higher due to their proximal reference groups being much poorer.

While objective approaches, such as the needs approach, are useful for policy makers they do not provide information about people priorities, their personal standards, and how they actually *feel* about their lives. People's lives may have improved objectively, but it is important to also consider whether people *feel* that their lives have improved. The use of subjective evaluations, and its relation to objective accounts such as 'need satisfaction' is therefore relevant for policy research.

2.4.4 RESOURCES AND AGENCY: LIVELIHOODS APPROACHES

The period of the 1980s-90s marked further attempts in the development sector to move away from static, narrow economic measures towards a fuller and more holistic, person centred approach to capturing people's construction of their wellbeing (Rakodi, 2002). Various frameworks and research methodologies developed during this period had as an objective to improve the understanding of the *actual* choices and actions of people in relation to the opportunities available to them (Alkire 2007).

Livelihoods frameworks had the aim of capturing the diversity of livelihood strategies employed by households, by considering a wider range of 'assets' and strategies than had previously been accounted for in traditional micro-economic models (Rakodi, 2002). The various frameworks aimed to better understand the constraints that people face in a particular context, and (as a result) how and why they make the choices that they do (Scoones, 2009). In addition, they provided more than a one-time assessment of a household's poverty, by accounting for shifts in strategies that may arise from seasonal changes, as well as longer terms shifts and cycles.

The resource profiles framework (RPF) developed at the University of Bath which was influential to the WeD approach, was informed by a body of ethnographic research conducted in Bangladesh during the 1980s. Unlike other popular livelihoods approaches (e.g. the sustainable livelihoods framework and Moser's (1998) Asset Vulnerability framework[19]) the RPF adopted a concept of resources, as opposed to assets and capital, which include social and cultural resources[20]. While lacking in economic assets, poor people are able to access and utilise a range of material and non-material assets, such as their labour, their knowledge and skills, family and friends, and the natural resources around them in constructing their wellbeing. The RPF emphasises the active relationship between households and the assets (material and otherwise) that they have access to, and the approach that they adopt to utilise them which is socially and culturally negotiated. The value of resources is contingent on the goals that are being pursued, as well as the wider context within which livelihoods and wellbeing outcomes are being negotiated (White and Ellison, 2007).

The approach of the RPF echoes Sen's work on capabilities by extending attention beyond what people have, to what they can do and be *with* what they have; as well as extending attention to the significant role of the social and cultural context, within which economic or material transactions take place.

2.5 CONCLUSION

In this chapter I introduced the construct of wellbeing. I then charted the emergence of alternative approaches to assessing wellbeing in response to acknowledgement of the shortcomings of the previously dominant money metric measures.

I discussed several frameworks and approaches that were influential to the development of the WeD framework to understanding and conceptualising wellbeing. I highlighted points of convergence between the different approaches and WeD's understanding of wellbeing. The unifying theme in these approaches is the centrality of the human being, and this also

[19] The sustainable livelihoods framework (SLF) (Scoones, 1998) developed by DfID and IDS categorizes the types of resources that people utilize into five categories: natural, social, physical, financial and human. Moser's asset vulnerability framework based on urban research adopted 5 categories of assets (labour, human capital, productive assets, household relations (which included the composition and structure of households and community relations) and social capital.

[20] The RPF takes account of five categories of resources mobilized by households and individuals in pursuing their wellbeing: 1) the material consists of cash-income and physical assets; 2) natural resources which comprise rights to common property; 3) human resources are comprised of the skills of capabilities of individuals and/or household members; 4) social resources are conceived of as the relationships people invest in to secure entitlements, these range for relationships within families and communities to relationships with officials; and lastly 5) cultural resources comprising the skills and capabilities.

connects the different frameworks. Any determination of need satisfaction can only be done with reference to the condition, and the aspirations, of the person in question. Resources that are available to a person can only be recognised as such because the person in question regards them as such; and lastly how a person feels about their condition can only be ascertained by asking them.

This does not imply that the WeD framework espouses an individualistic approach to wellbeing; rather the WeD emphasises that people are social beings constituted through their relationships with others and institutions. The WeD framework also acknowledges that human beings within a particular collective (be it a household, community etc.) will differ in their experiences (depending on age, gender, status) and in their opportunities to pursue and achieve wellbeing.

In the following chapter (Chapter 3) I discuss the various approaches that have emerged to conceptualise and operationalise subjective evaluations of wellbeing.

3 SUBJECTIVE APPROACHES TO WELLBEING ASSESSMENT

This chapter follows on from Chapter 2 in discussing the conceptualization of wellbeing put forth by the WeD (see section 2.3) as encompassing a subjective evaluation of people's objective circumstances i.e. 'how people think about what they have and can do'. Subjective evaluations are regarded as more participatory, very much contextual, being concerned with what people are thinking and how they are *feeling*; i.e. their own perspective, which can only be ascertained by asking them directly.

The interest in subjective evaluations is evident in a multitude of disciplines including Economics, Psychology, health and social statistics. Terms such as 'happiness', 'life satisfaction', 'subjective wellbeing' and 'quality of life' are difficult to separate and define, often being used interchangeably and being defined with reference to each other. In the following section I aim to provide the most commonly accepted definition of each construct, identify its source, and iterate how the concepts relate to one another.

3.1 WHAT ARE WE MEASURING?

In this section I introduce the different ways in which subjective evaluations of wellbeing have been conceptualised. It is important to understand the different approaches in order to be able to understand the BGA instrument's underlying conceptualisation of wellbeing, and to evaluate its effectiveness in relation to its intended application. Figure 2 summarises the different approaches.

In the pursuit of understanding subjective wellbeing or happiness in the field of Psychology, there are two main theoretical perspectives that have emerged, focussed on addressing the question of what makes people happy (Diener and Suh, 2000; Ryan and Deci, 2001). The *hedonic* view is that wellbeing is indicated by the presence of pleasure or happiness (Kahneman, 1999). Conversely the *eudemonic* views wellbeing as arising from a concordance between a person's values and, their goals and life activities; which together are conducive to the fulfilment of basic psychological needs (e.g. autonomy, relatedness and competence (Ryan and Deci, 2001). The eudemonic approach can be thought of as being concerned with the process of living well, and the factors that contribute to this; while the hedonic approach is focused on the outcome of this process (Fave, 2013). Diener et al. (1998, p. 34) attempt to reconcile the two perspectives by stating that happiness includes 'a feeling of mastery and making progress toward their goals', which may result in positive emotions; this may actually be a better definition of eudemonia.

A third approach is that of quality of life, described as consisting of both objective and subjective components, which has its origins in health, psychology, and sociology, and latterly in social and development policy. The BGA instrument which is the focus of this thesis falls into this third group as a subjective assessment of quality of life.

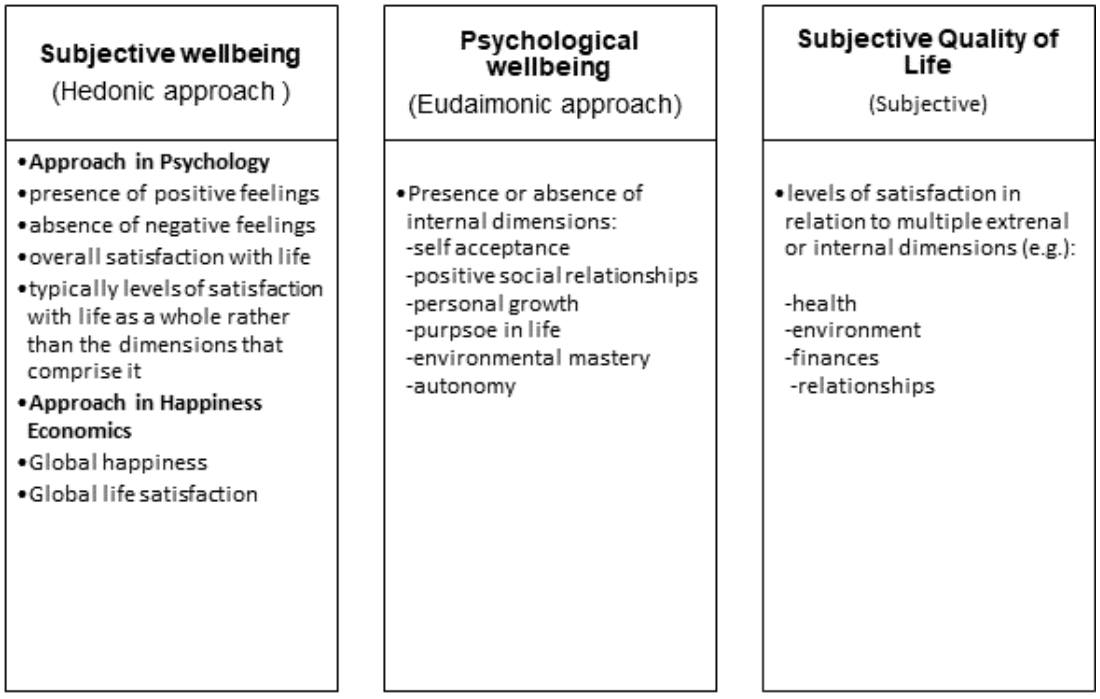

Figure 2 Subjective assessments of wellbeing

3.1.1 HEDONIC APPROACHES: HAPPINESS, LIFE SATISFACTION AND SUBJECTIVE WELLBEING

Adopting a 'hedonic approach' to the study of subjective wellbeing has been favoured by economists in a burgeoning field commonly referred to as 'Happiness Economics' (e.g. Frey and Stutzer, 2001). Economists have been drawn to the use of self-reported accounts of life satisfaction and happiness, primarily because it appears to offer a way of measuring utility. The adoption of this approach has enabled economists to better understand areas where the traditional outcome of interest 'revealed preferences' yields limited information e.g. for instance the effect on wellbeing of issues such as inequality and unemployment. Single questions to measure 'happiness with life as a whole' and 'life satisfaction' (i.e. global happiness and global life satisfaction) have been used extensively in several cross-national and cross-temporal surveys aimed at monitoring changing values and their impact on social and political life. Table 1 shows examples of some typical questions. Although researchers asking individuals about their happiness, or life satisfaction, claim that such questions have face validity (i.e. the purpose of the questions are clear to respondents), in reality it is unclear what information is being used by respondents to determine whether or not they are happy or satisfied. It is reasonable to conclude from these examples that the questions to obtain data on happiness and life satisfaction are very similar, and that they could be understood in the same way by respondents. Indeed, the terms 'life satisfaction' and 'happiness' are often

conflated by researchers themselves, as evidenced in the literature reviewed in Chapter 4. However, there are also recent findings that indicate that there are differences: measures of life satisfaction, for example are more strongly related to the economic or material condition of people, while happiness measures are more strongly correlated with personality.

Happiness (World Values Survey[21])	Taken all together, how would you say things are these days- would you say that you are very happy, pretty happy, or not too happy?
Life satisfaction (Eurobarometer Surveys[22])	On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the life you lead?

Table 1 Examples of typical questions used to measure life satisfaction and happiness.

The amorphous nature of the constructs of happiness, and life satisfaction make them an imprecise construct for scientific research (Forgeard et al., 2011). Psychologists demanding more rigour define subjective wellbeing (SWB) as more complex than happiness or life satisfaction. SWB is conceptualised as having three components: positive affect (experiencing pleasant emotions and moods), negative affect (experiencing unpleasant, distressing emotions and moods); and a cognitive component or life satisfaction (Diener & Lucas 2000; Diener & Rahtz, 2000). The *cognitive element* of subjective wellbeing refers to what one thinks about his or her life satisfaction. This can be in global (in relation to life as a whole), or in domain terms, relating to specific areas of life such as work, relationships, etc.). The *affective component* consists of emotions, moods and feelings. Positive affect refers to emotions, moods and feelings that are pleasant (e.g. joy, elation, affection etc.). Negative affect refers to emotions, moods and feelings experienced that are unpleasant (e.g. guilt, anger, shame etc.). If a person has a high level of satisfaction with their life, and is also experiencing a greater positive affect and little or less negative affect, it would be concluded that they have a high level of SWB or in simpler terms, that they are very happy. Measures of subjective wellbeing are measures of the affective component and measures of the cognitive component; these can be used separately or together.

[21] The World Values Survey (WVS) is a comparative investigation of socio-cultural and political change. It employs national sample surveys in over 90 countries. A common questionnaire is administered with variables on beliefs, values, economic development, democratization, religion, gender equality, social capital, and subjective well-being.

[22] The Eurobarometer surveys provide regular monitoring of the social and political attitudes of the EU population. Based on representative national samples of the populations of all European Union member countries, interviews are conducted each spring and each autumn.

Measures of subjective wellbeing defined in terms of happiness and pleasures, while important in evaluating the quality of life of societies and individuals, are insufficient as they do not address other values and aspects of life that are important to individuals. Individuals make a number of evaluative judgements regarding the attainment of their goals and values; these include the quality of their relationships, and whether they are living a 'good life' in terms of a personal and societal frame of reference. Abstracted from the details of people's lives these measures are of limited use to researchers, as they are unable to attribute changes in scores in life satisfaction or happiness to a particular intervention for example (White, 2009).

3.1.2 EUDAIMONIC APPROACHES: PSYCHOLOGICAL WELLBEING (PWB)

Psychological wellbeing (PWB) (under the umbrella of eudaimonia) has its origins in the fields of psychology and health. Proponents of PWB state that happiness per se should not be the principal criteria of wellbeing; and that not all desires should be pursued, regardless of whether they yield pleasure. The approach contends that human beings have psychological needs which contribute towards wellbeing independent of any feelings of pleasure that their achievement may bring (Deci and Ryan 2008). PWB is thus a broader construct than subjective wellbeing, going beyond emotional states and reflective evaluations, but instead is concerned with overall psychological functioning and mental health.

Examples of theories of wellbeing in the eudemonic tradition include Ryan and Deci's (2000) self-determination theory (SDT) which proposes that human beings have innate psychological needs, for autonomy, competence and relatedness. These three needs are factors that contribute to wellbeing by enabling a person to maximise their potential, rather than being indicators of wellbeing itself (Ryan and Deci, 2001). The SDT explains that both the content of goals and the processes through which they are pursued, contribute to psychological wellbeing. The SDT appears to be applicable across cultures, however the basic needs may not be equally valued in all 'families, social groups or cultures' (Ryan and Deci, 2001, p. 147); nonetheless the thwarting of any of these three needs will result in harmful psychological consequences in all social and cultural settings.

Another approach is that of Ryff (1989) who defines psychological wellbeing (PWB) as optimal psychological functioning and human actualisation. She specifies six components that constitute psychological wellbeing: self-acceptance (positive evaluation of oneself and one's life), personal growth, purpose in life, positive relations with others, environmental mastery (the capacity to effectively manage one's life and the surrounding environment) and autonomy (Ryff and Singer, 2013). While all of these components seem important there is evidence to suggest that the six dimensions of psychological wellbeing defined by Ryff and Singer (2013) reflect Western, individualistic values and are not equally valued in all

societies (e.g. Karasawa et al., 2011; Malla, 2013). In terms of the relationship between psychological wellbeing and subjective wellbeing there are differing views. Ryan and Deci (2001) consider them to be related, and that wellbeing includes both aspects.

While PWB is a narrower construct than SWB, concerned with how people are psychologically, there are questions concerning the cross-cultural relevance of models of PWB. As an indicator of wellbeing, being confined to psychological aspects and highly culturally specific, they are of limited use to development practitioners. The BGA instrument which is the focus of this thesis uses a broad definition of QoL, referring to people's goals, which can be related to either seeking pleasure, living in accordance with one's values, or achieving goals or need fulfilment in particular areas of life.

3.1.3 THE CONSTRUCT OF QUALITY OF LIFE

The third area in which subjective evaluations of wellbeing have been prominent is that of quality of life (QoL). Subjective quality of life approaches are most common in the fields of health, and social and development policy. Research into quality of life gained impetus during the 1970s from health psychologists and clinicians attempting to assess the perception of people regarding their health status, alongside a parallel movement to develop 'social indicators' to measure societal progress which drew on both subjective and objective data.

In contrast to happiness, life satisfaction or subjective wellbeing, the strength of the construct of quality of life is that it is conceptualized as consisting of heterogeneous multidimensional components[23], which are both subjective and objective. Whilst, SWB also refers to the multidimensional evaluations of lives, QoL encompasses more than life satisfaction and affect. Thus the construct of quality of life is consistent with WeD's overall conceptualization of wellbeing. Rapley (2003, p.50) summarises the key characteristics of several widely accepted definitions of quality of life as follows: 'all specify that QoL is an individual's *psychological perception* of the material reality of aspects of the world'.

QoL models may include some psychological factors, but also commonly encompass other aspects of life such as housing, income, education and family and social relationships. Being able to ascertain information about different aspects of people's lives is useful for programme managers interested in evaluating the impact of interventions. Subjective questions of QoL are generally comprised of questions regarding satisfaction within a set of domains (i.e. aspects of life).

[23] A person's subjective wellbeing (SWB) is also considered a multidimensional evaluation of their life (Eid and Diener, 2004); however quality of life encompasses more that life satisfaction and affect.

In other words, QoL is influenced by the extent to which objective human needs are met in relation to individual perceptions of subjective wellbeing. These human needs encompass basic needs for subsistence, reproduction, security, affection etc. The relationship between different needs and their perceived satisfaction is influenced by the cultural and social context, the information available to the individual; and their personal characteristics, as in their gender, age, personality or temperament and social standing.

The World Health Organisation defines QoL as being based on the person's perceived position in relation to their personal criteria as follows:

> *"... an individual's perception of their position in life in the context of their culture and value systems in which they live and in relation to their goals,standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships and their relationship to salient features of their environment... quality of life refers to a subjective evaluation which is embedded in a cultural, social and environmental context."* (The WHOQOL Group, 1995, p. 1403).

The implications of this definition - that QoL is theorised as the perceived discrepancy between goals and goal achievement' – was drawn out by the WeD group and this theorization also underpins the design of the Bangladesh Goal Attainment measure. Within psychology it is widely agreed that an individual's personal wellbeing is dependent on them striving towards some set of goals (e.g. Sirgy, 2012). Accordingly, many of the definitions of QoL that exist incorporate this theorisation e.g. Campbell et al (1976, p. 8) saw QoL as arising from the fulfilment of goals, where the degree of satisfaction is 'the perceived discrepancy between aspiration and achievements, ranging from the perception of fulfilment to that of deprivation'. Similarly Calman (1984, p. 125) defines QoL as 'the difference, at a particular point in time, between the hopes and expectation of the individual and the individuals' present experience'.

Although originating in health-related research Calman's (1984) definition of quality of life is highly inclusive and acknowledges its multiple dimensions and influences. It is also consistent with Lane's (1994 p.259; In:Noll 2002) definition of a person's quality of life as an outcome of their objective and subjective sets of circumstances. Lane (1994) specified two subjective or person based components (which make up the 'quality of person' (QP): (1) a sense of subjective well-being and personal development, and (2) learning and growth. The objective set refers to the quality of the environmental conditions (QC) which represent the opportunities that a person has to achieve QP. Noll's (2002) definition emphasises the active

role of the person (in terms of certain cognitive and personal abilities[24]) to achieve wellbeing.

Barofsky (2011) notes that definitions, such as these, are based on a number of assumptions, namely that people have an understanding of their needs and or goals which they want to achieve, and to what extent they have been achieved, and this in turn determines their level of satisfaction with their QoL. This indicates that QoL evaluation is a cognitive process as much as an affective one whereby the individual matches what they 'ideally hoped for, expected, aspired to, or set as goals with what has been achieved' (Barofsky, 2011, p. 41). Calman (1984) discussing some implications of his definition concludes that any QoL measure must take into account many aspects of life, and that QoL will be influenced by the person's experiences in the past, their present circumstances and their future aspirations. In other words, QoL is a dynamic construct, where people's priorities in terms of their goals will shift over time or as the result of an event or intervention (in Chapter 4 I discuss the implication of this for the usefulness of subjective measures for policy decisions). The fact that there are shifts in priorities suggest that data on the importance of the different aspects of life making up a person's QoL is just as valuable as their level of satisfaction with the different aspects (this is discussed in 3.3).

The interest in multi-dimensional measures of subjective QoL reflects concerns that QoL assessments should be more participatory, with a greater interest in understanding how people view themselves and their situation (see, e.g. Barua, 2009, in Bangladesh). An individual multidimensional QoL measure has several advantages over previous participatory, qualitative methods; it will be less time consuming to administer, requiring less experienced data collectors, reducing costs and respondent burden. As they are readily added onto existing household surveys, they can be administered to representative samples; and the data is amenable to statistical analyses. These considerations were influential in the development of WeD's own measure of subjective QoL, the WeDQoL (3.4.3), which laid the groundwork for this thesis. The WeDQoL provided participants with a list of previously identified facets relevant to the population, and considered individual perspectives and values by asking respondents to rate the importance of the different aspects in addition to rating their satisfaction with each item. The aim of both instruments was to show the potential application of an individual QoL instrument to development practitioners and policy makers as an alternative source of evidence.

[24] There are convergences here with the basic need of autonomy defined by Doyal and Gough (in their Theory of Human Need) as 'cognitive and emotional capacity', explained as ' the level of cultural understanding a person has about herself, her culture and what is expected of her as an individual within it', in other words being able to make informed choices about what should be done and how to go about doing it (see section 2.4.3).

3.1.4 DISCUSSION

In this section I discussed the various ways in which subjective evaluations of wellbeing have been conceptualised. In comparison to objective approaches (most commonly using household surveys), there are few examples of the use of subjective approaches for the assessment of QoL in developing countries to date. Most commonly developing countries have been included in cross-national surveys of happiness and life satisfaction (e.g. the World Values Survey). The interest in multidimensional measures of subjective QoL reflects concerns that QoL assessments should be more participatory and more specific, with a greater interest in understanding how people view themselves and the particular aspects of their situation.

In the next section I focus on subjective QoL and discuss how the different constructs have been operationalised for measurement.

3.2 MEASUREMENT OF SUBJECTIVE QOL

Measures that have been used for the measurement of subjective QoL can be broadly categorised depending on their underlying conceptualization of wellbeing either as a unidimensional, global construct or a multidimensional, domain or profile based construct. There are three approaches to measurement, summarized in Table 2, which I will discuss in greater detail.

Global, unidimensional single item	e.g. Taken all together, how would you say things are these days- would you say that you are very happy, pretty happy, or not too happy? (GHQ, from the World Values Survey)
Global, unidimensional Multi-item	e.g. the Satisfaction with Life Scale (SWLS, a 5-item scale which measures satisfaction with life as a whole
Profile, domain multidimensional	e.g. The World Health Organisation Quality of Life Measure (WHOQOL-100) (WHOQOL Group, 1995) and the WeD instrument, WeDQoL. Profile measures are commonly phrased in terms of satisfaction with specified domains of life.

Table 2 Measurement approaches

3.2.1 GLOBAL, UNIDIMENSIONAL

Global measures of wellbeing are believed to reflect the influences of diverse aspects of life and to allow respondents to freely weight the different aspects of their life (reflecting their values and preferences) in reaching their judgement (Diener et al. 2013), although the scores

themselves do not provide any information about how the respondents have made these weightings. Global wellbeing measures are also thought to circumvent the issues of cultural specificity which are present in the cross cultural application of content based-measures developed in North American or European contexts (Diener and Suh, 2000). They allow the respondent to take account of their values and preferences as well as their chosen outcomes (Gill, 1995). Global, unidimensional measures can take the form of a single item measure or a multi-item measure.

Single item measures of global wellbeing include the general happiness questions (GHQ) and life satisfaction questions used in surveys such as the Eurobarometer and the World Values Survey. These scales can vary in the number of points on the response scale (ranging from as little as 3 or 4 points - up to 10 points). Single item wellbeing measures are a popular supplement to existing indicators for assessing the quality of life in societies, as part of longitudinal and inter-cultural studies. They are simple to administer in surveys, inexpensive, and subsequent analysis of the data is straightforward. These measures are reported to be readily understood by respondents, minimizing non-responses in comparison to multi-item scales (E. Diener, 1984). Several authors (Cummins et al., 2004; Fayers and Hand, 2002) have pointed out that single items are more appropriate for measuring wellbeing as multi-item scales often combine scores from global indicators of wellbeing with the scores from items that *contribute* to global wellbeing. However, there are also a number of significant concerns with single item measures, as valid indicators of subjective wellbeing. For instance a large proportion of the variance in scores is attributed to error rather than true variance (Larsen and Fredrickson, 1999). Schwarz & Strack (1991, p.80) in a critical review conclude that "there is little to be learned from self -reports of global wellbeing": they report that single item measures of wellbeing suffer from low temporal stability, and are susceptible to biases and transient factors such as momentary mood, details of their physical surroundings; as well as being influenced by the items preceding the life satisfaction or wellbeing question on a questionnaire. In addition, single item measures may be more amenable to manipulation by a respondent who does not wish to reveal their true level of happiness or satisfaction, and more susceptible to social desirability biases (Tourangeau and Smith, 1996; Tourangeau and Yan, 2007).

From another perspective, the fact that the mood of the respondent strongly determines global life satisfaction rather than satisfaction with particular domains has also been used to support its use. Davern, Cummins & Stokes 2007) suggest that since global questions, such as 'How satisfied are you with your life as a whole?' are extremely abstract, the response that people give does not represent a cognitive evaluation of their life. Instead responses to such questions reflect a person's ongoing mood state which generally approximates to their set-point 'core affect'. A person's 'core affect' is a deep and stable positive mood state

which underlies the homeostatic process that helps to maintain levels of SWB in the 'satisfied sector of the dissatisfied-satisfied continuum' (i.e. the normative range) (Cummins 2008 , p 33); this is evidenced in the higher than expected levels of life satisfaction even in contexts of considerable poverty (e.g. Biswas-Diener and Diener, 2009). Cummin's argues that although SWB is an insensitive variable, it is a useful indicator. When levels of SWB do fall below its normative range, it arises from 'homeostatic failure' and indicates that the respondent is at risk of experiencing depression; i.e. that the person's QoL is significantly compromised.

Multi-item measures include the Satisfaction with life scale (SWLS) (Diener et al., 1985) (Diener et al. 1985). This scale is designed to measure global life satisfaction through five items, each of which involves an overall judgment of life in general. The scores from these items are then summed as a measure of SWB. The SWLS is available in the public domain, has been translated and applied in numerous developing settings, including in South Asia (Bangladesh (e.g. Sagar and Karim, 2014) and India (e.g. Biswas-Diener and Diener, 2009). Although taking longer to administer, compared to single item measures, the use of multiple items means that the errors that single item measures are inherently susceptible to are averaged out leading to increased reliability and construct validity[25] (DeVellis 2003, p.97; Diener et al. 2002;*In:* Lopez & Snyder 2011). Pavot and Diener (1993) also found that that the issues of item placement (the order of items within a questionnaire) and momentary mood did not have a significant effect on multi-item measures such as the SWLS, in comparison to responses to single item measures. For example, the SWLS has been reported to generally give lower scores for life satisfaction compared to single item, this may indicate that the multi item SWLS scale is less affected by certain biases e.g. global positivity[26] or social desirability[27] bias, although there is currently little evidence as to whether or how these biases operate in non-Western contexts.

While global measures are useful (e.g. as an indicator of 'core affect' as discussed), the use to researchers and programme managers is limited; any changes in scores in life satisfaction or happiness cannot be attributed to a particular intervention or event (White, 2009). Global measures do not provide any detail as to what the respondent is experiencing as good or bad in relation to QoL, nor what is important to them; or indeed how they define QoL. The sources of change in scores from one assessment to another cannot be determined; and

[25] The extent to which an instrument is measuring what is intended to be measures

[26] The tendency to respond to questions concerning happiness or satisfaction with life as a whole very positively observed among North American respondents

[27] The tendency of survey respondents to answer questions in a manner that will be viewed favorably

significantly a lack of change in a global score from one time to another is equally difficult to interpret.

3.2.2 DOMAIN BASED, OR PROFILE MEASURES OF WELLBEING

The 'domains of life' approach assumes that well-being can be understood as the sum of satisfaction in certain areas of life. The items included in a measure can be deductively assumed based on an a priori model or inductively developed (i.e. emic scales); factor analysis is commonly used to identify the larger constructs underlying these items (factors). Such measures can provide a complete profile of multidimensional wellbeing, and can yield information on changes within the individual dimensions measured by the scale, although at the cost of increased burden and the risk of asking irrelevant questions if the measure has not been tailored to a particular context or group. For policy and programme evaluation the use of profile measures enables them to evaluate the impact of interventions, and identify areas that may need attention.

Within health-related quality of life (HRQoL), where much of the development of profile measures has taken place, there are further distinctions**. Generic measures** are designed to measure very broad aspects of health and are therefore potentially suitable for comparisons between a wide range of patient groups and the general population, provided that the relevant variables are addressed. One of the most widely used generic measures is the Short Form - 36[28] (SF-36) (Ware Jr and Sherbourne, 1992), developed by the Medical Outcomes Study. The SF-36 has also been successfully translated and adapted for use in Bangladesh (Ahmed et al, 2002). The most widely used generic instrument is the WHOQOL-100 which has been applied extensively within international health research.

However, these measures may not be sensitive to problems unique to particular health conditions and exhibit significantly skewed distributions in test scores, as a result of high floor and/or ceiling effects (i.e. percentages of respondents with minimal and maximal scores, respectively).

Specific measures of HRQoL on the other hand, are designed to measure QoL in relation to a particular age group, disease, treatment group or population group e.g. for older people or carers (e.g. the Diabetes Quality of Life (DQOL) is a diabetes specific measure of health related quality of life for use with adults and adolescents (Jacobson et al., 1994). These

[28] The SF-36 consists of a multi-item scale that assesses the following eight health concepts: 1) limitations in physical activities because of health problems; 2) limitations in social activities because of physical or emotional problems; 3) limitations in usual role activities because of physical health problems; 4) bodily pain; 5) general mental health (psychological distress and well-being); 6) limitations in usual role activities because of emotional problems; 7) vitality (energy and fatigue); and 8) general health perceptions.

measures are more sensitive e.g. a disease specific measure will be able to discriminate more between differing levels of severity for different patients, and more sensitive to clinical outcomes. However, the use of a measure specific to different diseases or groups of people (e.g. women aged 20 to 45 years in Bangladesh) means that while the content of the instrument will be more relevant to the particular group targeted, comparisons cannot be made with other groups or the general population, as the different measures used will have different psychometric properties.

3.2.3 DISCUSSION

Global unidimensional measures though valuable, are of limited value to policy and program managers. Profile measures provide a complete profile of multidimensional wellbeing, and can yield information on changes within the individual dimensions measured by the scale making them more useful for policy and programme evaluation. A women and age group specific profile measure, such as the Bangladesh Goal Attainment instrument (BGA), will mean that the content of the instrument will be more relevant to the particular group targeted i.e. women in Bangladesh.

In the next section I discuss how measures of QoL can be further individualized to capture the uniqueness of each respondent's QoL and why this might be valuable.

3.3 INDIVIDUALISING QOL MEASURES

Although wellbeing is thought of as a global concept (Diener, 1984), it is understood that the relevance of QoL items varies between individuals and groups (Campbell et al., 1976; Inglehart, 1978; Trauer and Mackinnon, 2001).

Profile measures (discussed in the previous section) are standardized measures, as they ask every respondent the same questions and require responses to be selected from a predetermined scale; this means that the respondent's perspective is captured through the lens of a model of quality of life developed externally (by 'experts'). These predetermined instruments may contain items that may not be relevant for all individuals whose QoL is being assessed; and secondly, they assume that all aspects applied are of equal importance for all respondents, neglecting the variation of importance of different life areas for individuals, which can be a valuable insight for people designing programmes.

Measures can be individualised by including an element of weighting, in order to reflect the understanding that QoL is unique to the individual. In the first approach profile measures with predetermined domains include an additional step in which respondents rate the importance of each domain based on importance; the use of importance weightings is thought to improve 'face validity'. This approach is relevant to the development of the BGA.

A second approach allows respondents to nominate the domains, and then to rate the importance of each of these domains; the measure is then specifically tailored to the respondent. This category of instrument is interesting for another reason; traditional quality of life questionnaires are predominantly focused on limitations and impediments, but an instrument which allows the respondent to nominate areas allows respondents to consider areas of life which are positive and contribute to their quality of life (Hyland, 1992). Examples of such measures are the Schedule of Individualised QoL, (SEIQOL) (Moons et al., 2004) and the Patient Generated Index (Camfield and Ruta, 2007). The definition of QoL underpinning the SEIQoL is that QoL is 'what the individual determines it to be'. The definition and the measure encompasses the idea that quality of life is an individual construct, i.e. the areas of life that are of importance to one person may not be important to another.

The main criticism of fully individualised measures (i.e. respondents define content and assign weights) is that inter-person comparisons are not possible, as respondents are not all rating the same items. How significant this is depends on the purpose of the QoL measure. Some researchers have questioned the value of scales individualised for content. For instance, during the development of the WHOQOL-100, an inductive approach was used to develop question items in each of its 15 country centres; surprisingly there was a considerable amount of agreement in the facets and individual items[29] between the 15 centres (WHOQOL Group, 1994). Bullinger (1999) suggests that the WHOQOL Groups findings at the inter-cultural level can also be applied at the individual level; implying that there will not be much variance explained by including individual specific items within an individual level measure.

3.3.1 SHOULD SUBJECTIVE WEIGHTING OF DOMAINS BE INCORPORATED INTO MEASURES OF QOL

The interest in developing population specific instruments arises from the idea that different aspects of life are relevant to different groups necessitating the development of scales with different item content. For instance there were differences in the importance of items of the

[29] It should be noted that the 6 domains which make up the WHOQOL-100 instrument were predetermined. Each domain was further divided into a series of specific areas (facets) summarising each particular domain.

WHOQOL-Bref.[30] when administered to participants in the 15[31] centres (Saxena et al., 2001). The countries were grouped into developing[32] countries and developed countries, and there were significant differences in importance found in 18 of the 25 items. Happiness and enjoyment of life were significantly less important in the developing countries, whilst freedom from pain and ability to work were significantly more important.

Considering individual differences, people enjoying good health, may not consider issues related to health as important as those in poorer health. Similarly, for a person who considers good relationships with family and friends as central to their life quality then their level of satisfaction with such a domain is extremely relevant.

Since people differ with regard to which dimensions are more important to them, simply adding satisfaction scores across domains produces an inaccurate measure of quality of life (Ferrans and Powers, 2003). To improve the accuracy of measurement, it has been considered good practice to include the respondents' evaluation of importance as a weighting component in the measurement of QoL (Russell and Hubley, 2005). Incorporation of importance weighting is particularly salient when considering the 'bottom-up' approach to the conceptualization of global life satisfaction as the sum of satisfaction ratings in various domains (Diener, 1984); it follows that important domains should make a greater contribution to an individual's QoL total score. Measuring importance also has considerable face validity, i.e. respondents understand the implications (Trauer and Mackinnon, 2001)[33].

Subjective (or internal)[34] weights are obtained by asking the respondents to provide importance ratings which are then applied to scale items (Russell and Hubley, 2005). These weights represent each respondent's subjective sense of which domains are more important, and the composite scores obtained using subjective weights use a unique set of weights for each respondent. The most common method of incorporating importance weights has been to

[30] The WHOQOL-Bref. is a shorter version of the WHOQOL-100, and is comprised of 26 items which measure the following broad domains: physical health, psychological health, social relationships, and environment (WHOQOL group, 1994).

[31]The 15 centres are: Australia, Croatia, France, Japan, India (2 centres), Israel, Netherlands, Panama, Russia, Spain, Thailand, UK, USA and Zimbabwe.

[32] Croatia, India (2 centres), Israel, Panama, Russia, Thailand, and Zimbabwe were categorised as developing.

[33] A test is said to have face validity if it appears to measure what it is supposed to measure.

[34] Weights can also be objective (or external) based on theoretical or conceptual grounds (Russell and Hubley, 2005), or statistically. Weights that are determined statistically may be based on regression coefficients obtained in a regression analysis, where the predictor variables are the individual domain scores and the criterion variable is some global measure of the construct of interest. As a consequence the regression weights may vary considerably depending on the choice of criterion variable. The same weights are applied to scale items before calculating a composite score for all respondents, with no consideration of any potential individual differences (Russell et al., 2006).

calculate a multiplicative score. This entails computing the product of the importance rating and satisfaction rating (primary rating) for each of the domains (or items) which constitute the construct of interest. The total score obtained by summing these weighted domain scores represents the measurement for the overall construct.

QoL instruments such as the Comprehensive Quality of Life Scale (COMQOL) (Cummins 1998; Cummins 1997), the Quality of Life Index (Ferrans and Powers, 1985) and the Quality of Life Inventory (Frisch et al., 1992) among others include a primary rating (e.g. satisfaction) and an importance rating for each item or domain. The importance ratings are then used to weight satisfaction ratings, so that the scores reflect satisfaction with the aspects of life that are valued by the individual.

Aside from efforts to improve scale reliability and validity, importance ratings are of value in themselves. During the development of scales, information about subjective item importance is useful for instrument developers to determine whether items are relevant to the research sample and population for whom the scale is intended. This enables developers of instruments to identify potentially redundant items, for possible removal before a scale is finalised, and subsequently reduce respondent burden (Skevington, 2004). Item importance information can be used to explore value differences between different groups such as different social or cultural groups; for example, Saxena et al (2001) examined the difference of values on life domains among age, gender and cultural groups by the importance ratings of WHOQOL-Bref items. Importance ratings can be used to assess average perceptions of importance which might inform causal hypotheses regarding what is influencing satisfaction. By identifying the particular aspects of life which are valued by the target population or individuals, programme developers or service providers are able to design appropriate interventions thereby improving their efficiency and success in terms of increases in subjective wellbeing or QoL (Copestake and Camfield, 2010). The incorporation of importance weightings may also help to identify those with the poorest QoL , e.g. Skevington (2004) found that respondents to the WHOQOL-100 rating areas of QoL as poor and important would have the very poorest QoL compared to other combinations of scores and importance, a finding that highlights the value of the gap theories discussed in section 3.1.3.

However, the process by which people weight the importance of areas is complex; there may be inter-cultural differences in the cognitive processes of importance weighting. For instance East Asians tend to weight lower satisfaction areas as more important, while Latin Americans weight high satisfaction areas as more important; reflecting the cultural norms of self-criticism (i.e. a desire to improve in areas where you feel you are not performing well) and dispositional positivity respectively (Diener et al., 2000). People residing in

individualistic cultures, which prioritise the autonomy of the individual, are more likely to rate psychological factors or emotions as important compared to those who ascribe to a collectivistic perspective (Diener and Oishi, 2004).

A further perspective comes from response shift ((Sprangers and Schwartz, 1999); individuals may reprioritize their values in order to maintain or enhance their QoL in response to an event. This process of reprioritization of goals allows people to adapt to adverse circumstances and maintain levels of subjective QoL.

3.3.2 THE DEBATE REGARDING THE INCORPORATION OF IMPORTANCE RATINGS

Although the incorporation of importance weighting in QoL instruments is intuitively desirable, there is considerable debate regarding whether the weighting of subjective evaluations by subjective importance improves the actual measurement of QoL. In addition to the practical issue that incorporating importance ratings into a measure doubles the length of an instrument and impacts upon response rates, substantial empirical and conceptual evidence has also been presented to argue against the utility of importance ratings of domains (particularly when *multiplicative scores* are used).

In a seminal paper Trauer & Mackinnon (2001) concluded that weighting by importance was an unnecessary practice; their arguments are summarized as follows:

> (1) Selection of items for inclusion in a scale is based on their general relevance to the target population rendering importance rating redundant.
> (2) Respondents by indicating that their satisfaction is other than neutral suggests that the domain is important; i.e. a very positive or a very negative evaluation of satisfaction implies a level of subjective importance making separate importance ratings redundant.
> (3) The way in which scores are combined can lead to numerical equivalence between high satisfaction with something of low importance and low satisfaction with something highly important.
> (4) The psychometric properties produced when satisfaction scores are multiplied by importance ratings lead to reduced reliability.

In the following sections Trauer and Mackinnon's criticisms are considered in more detail.

3.3.2.1 QoL items are not equally relevant to all individuals.

There are limited examples of research evaluating the relevance of domains typically found in wellbeing or QoL measures. Prior to developing the Comprehensive Quality of Life Scale (ComQol) (Cummins, 1994), Cummins conducted an extensive review of potential domains of quality of life and derived seven. During the development of the measure (Cummins,

1994, p. 373), participants were presented with 64 variables[35] associated with different QOL aspects and asked to classify the 64 variables under the seven domain headings; any variables which they felt did not 'fit' under any of the seven domains could be placed in an 'other' category. The participants placed 97% of the variables under the seven domain headings; this was taken to indicate that the seven domain headings encompassed the full range of QOL variables. Cummin's (1994) asserts that these findings indicate that the seven domain headings encompassed the full range of QoL variables and that all the variables are relevant and important to the target respondents. However, it is not clear whether the respondents were asked to consider the relevance or importance of the items during the exercise; furthermore, it is not clear whether respondents were asked to name any further areas for inclusion.

Profile measures may omit areas of importance to some individuals (this is discussed in relation to the WeDQoL- Bangladesh 3.4.3). More extensive exploratory work during the development of instruments and their item pool would help to address this avoid this; as would measures targeting specific population groups e.g. a gender focussed instrument such as the BGA, although this might be at the cost of comparability with evidence on other groups.

Alternatively, the use of individualised measures that allow respondents to nominate the QoL areas important to them could also improve measurement. However, as discussed earlier inter-person comparisons are not possible with individualised measures, as respondents are not all rating the same items. In addition, in the same way that the cognitive processes surrounding importance weighting are not understood, there is limited understanding of the cognitive processes which determine areas for inclusion in individualised measures, e.g. do people choose areas that contribute in a positive way to their QoL, or areas which effect their QoL negatively (see the earlier discussion of cultural bias in relation to this).

3.3.2.2 Domain satisfaction does not always correlate with importance

Evidence that importance and satisfaction scores are associated is mixed. Trauer and Mackinnon (2001) (using data from participants with a mental illness) illustrate that extreme satisfaction ratings i.e. highly positive or highly negative were associated with higher importance, suggesting that subjective evaluations of satisfaction already include a component of subjective importance. Other studies using correlation analysis have not supported the statistical association of satisfaction and importance ratings (e.g. Russell et al.,

[35] The 64 dependent variables addressing different aspects of quality of life were extracted from a literature review of over 500 publications involving quality of life.

2006; Wu and Yao, 2006); the correlation of importance scores and weighting scores were generally non-significant , and those that were significant were weak (the largest correlation being.31, $p<.001$).

Empirical arguments against the usefulness of importance weighting have arisen from analyses where domain importance as a weighting factor did not result in a detectable increase in the power to explain variations in global QoL measures (i.e. overall life satisfaction), in comparison with approaches utilising a simple sum of domain satisfaction scores. Campbell et al (1976) attempted several different scoring systems and techniques and found that domain importance rating as a weighting factor did not improve the total variances explained between global QoL instruments and domain satisfaction composites. Similar conclusions have also been reached by other researchers. Cummins (2002) performed a hierarchal regression with satisfaction entered as Step 1 and importance entered as Step 2, and reported that no significant extra variance could be accounted for. Russell et al (2006) conducted the analysis of a stepwise regression model where domain satisfaction scores for the quality of life measure in this case the injection drug users quality of life scale (IDUQOL) were first entered, followed by domain importance scores; there was no significant change in the variance of the model to explain life satisfaction scores with the inclusion of importance. Russell et al (2006) also found that that there were no differences in the results using unweighted scores or weighted scores when examining convergent and divergent validity. These findings suggest that weighting does not improve the validity of QoL measures.

While it appears that importance questions and satisfaction questions are indeed measuring two different constructs the lack of improvement in the explanatory power of statistical models with the inclusion of weighting ratings suggests that adding a weighting step to instruments does not improve the accuracy of QoL measurement.

The prevalent method of obtaining the composite scores in which domain satisfaction scores are multiplied by importance ratings to obtain multiplicative scores may be related to the apparent redundancy of importance scores. This is discussed in the next section.

3.3.2.3 The statistical properties of importance weightings are unfavourable

A commonly discussed problem associated with incorporating importance ratings concerns the validity of the composite score obtained by multiplying the primary rating (satisfaction) by the importance rating (Cummins, 2002; Trauer & Mackinnon, 2001). Likert scale data, such as satisfaction and importance ratings, are quasi-interval and not ratio (Cummins, 2002). Meaningful interpretation of any multiplicative composite requires the scores to be measured in ratio data (Schmidt, 1973). This impacts upon the legitimacy of the

multiplicative composite obtained via multiplying importance by satisfaction. Moreover, there is the critical issue of multiplicative equivalence (Trauer and Mackinnon, 2001). For instance, a particular composite score may be obtained in several ways i.e. by combining a high satisfaction rating with a low importance rating, and by a low satisfaction rating with a high importance rating (Table 3). Although resulting in the same score it would be incorrect to conclude that these two very different situations represent an equivalent level of QoL (Streiner and Norman, 2008). In effect, multiplying satisfaction and importance scores to obtain a weighted score does not allow a valid discrimination, and obscures the fact that people having the same weighted score could have quite different experiences of QOL.

	Satisfaction	
Importance	High	Low
High	5*5	5*1
Low	1*5	1*1

Table 3 Numerical equivalence when multiplying satisfaction by importance

The issue may then be with the multiplicative method rather than weighting itself. Wu and Yao (2006) compared four different weighting methods, and found that he correlation between QoL scores and a global life satisfaction score was not higher for weighted scores in any instance. In a small scale study Hsieh (2003) demonstrated that weighting satisfaction scores with importance *rankings* can improve the correlations between item satisfaction and global satisfaction measure.

Another psychometric aspect concerns the reliability of importance scores, although the empirical evidence concerning this issue is somewhat mixed. The temporal stability of importance ratings is less reliable than corresponding domain satisfaction ratings (Russell and Hubley, 2005); test-retest correlations ranged from 0.32 ($p<.05$) to 0.67 ($p<.01$) for domain scores, and 0.30 ($p<.05$) to 0.73 ($p<.01$ for importance score. Russell and Hubley (2005) concluded that the poor reliability of importance scores seriously undermines any inferences made on the basis of importance scores.

Several studies have also shown that importance ratings have low internal consistency estimates compared to the satisfaction ratings. For example, Cummins et al 1994 reported that the Cronbach's alpha[36] for importance items was.65, whereas the alpha value for the corresponding satisfaction items on the quality of life scale was.73. Similarly reporting the results from a study of QoL among injection drug users found that Cronbach's alpha values

[36] Cronbach's alpha is a measure of how well the items measure the same construct. The recommended minimum value for reliability coefficients is.70 (Nunnally, 1978)

were.88 and.65 for satisfaction scores and importance scores respectively. But should we expect inter-correlations between satisfaction ratings to be similar to the inter-correlations between importance ratings, when importance of different items is unique to the individual?

3.3.3 CONCLUSION

It has long been understood that the different aspects or areas of life vary in importance among individuals. The measurement of importance in psychological constructs, including wellbeing, has a tremendous amount of intuitive appeal and face validity. The incorporation of importance weightings in wellbeing measurement is a contentious issue, with several theoretical and statistical arguments against this practice.

Although importance ratings may not improve accuracy of the measurement of QoL; importance ratings are important in their own right as an aid to programme designers and policy makers.

3.4 EXPERIENCES OF APPLYING QOL MEASURES IN BANGLADESH: UNIVERSAL SCALES vs NATIVE SCALES

Within HRQOL research there has been an interest in the cross-cultural application of QoL measures. However, to date there have been few measures that have been developed specifically for use in developing countries, or indeed Bangladesh. In this situation it is common for existing instruments, originally developed for use with Western populations in the English language, to be translated and adapted for use. However, there are difficulties with translating existing instruments. For example: in the case of HRQOL instruments developed in Western settings, a successful translation from the original language to the 'target' language would require a similar concept of health in both cultures, as well as similar health care systems, and practices (Camfield, 2012).

To ensure that the content, concept, construct and scoring method of an instrument are valid and it is acceptable to other populations the International Quality of Life Assessment (IQOLA) Project has developed a standard method for cross-cultural applications of an HRQOL instrument, consisting of three stages (Bullinger, 1997). Firstly, rigorous translation and evaluation procedures to ensure conceptual equivalence and respondent acceptance; secondly, formal psychometric tests of the assumptions underlying item scoring and construction of multi-item scales; and thirdly, examination of the validity of the scales, accumulation of normative data by applying the measure in the general population, and evaluating the equivalence of interpretation across countries. The first two stages are essential before the instrument can be applied to the population concerned and the third is for developing a reference norm for meaningful interpretation of data obtained from specific patient groups.

Another approach has been the development of an instrument cross-culturally and simultaneously; the development of the World Health Organisation's WHOQOL-100 and WHOQOL-Bref are examples and are described below.

3.4.1 DEVELOPING INSTRUMENTS FOR CROSS- CULTURAL APPLICATION: The WHOQOL-100 (The WHOQOL GROUP, 1995)

The WHO set out to develop two generic HRQOL instruments (the WHOQOL-100 and the WHOQOL-Bref) that can be used in countries worldwide, as part of multinational epidemiological studies and clinical trials (The WHOQOL Group, 1995). The WHO defined quality of life as 'an individual's perception of their position in life in the context of culture and values in which they live and in relation to their goals, expectations and concerns'(The WHOQOL Group, 1995). The resulting instrument had to be easy to use and demonstrably applicable in different cultural settings, with results being comparable across these settings.

To achieve this 15 different WHOQOL centres[37] worked simultaneously on the same stage of instrument development, pooling results and ideas centrally and continually communicating with one another to achieve equivalence. The national centres are varied in their levels of development , health care provision and other characteristics relevant to the measure of subjective QoL (e.g. the role of the family, perception of time, perception of self, dominant religious denomination) (World Health Organisation, 1996). However, the overall structure of the WHOQOL measures was determined in advance by a small group of 'experts'; defining QoL as consisting of six domains: physical, psychological, social, economic, environmental and SRPB (Spirituality, Religion, and Personal Beliefs). Each of the WHOQOL centres participated in generating individual facets and questions under these domains. Focus groups were used in each country to develop questions in locally appropriate language. Cross-culturally comparable response scales were also developed.

The important aspects of quality of life and ways of asking about quality of life were drafted on the basis of statements made by patients with a range of diseases, by well people and by health professionals in the different field centres. The importance of the domains and items was highly equivalent across countries and the cross–cultural validity and reliability of the instrument has been tested in psychometric studies in each of the field centres (Power et al., 1999). There was a provision to include items that were highly important in a particular site as national items in the country-specific language version of the WHOQOL, although these items have not usually been included in analyses. The instrument was rigorously tested to

[37] The 15 centres are: Australia, Croatia, France, Japan, India (2 centres), Israel, Netherlands, Panama, Russia, Spain, Thailand, UK, USA and Zimbabwe.

assess its validity and reliability in each of the field centres; to date there have been limited studies regarding the responsiveness of the measure over time.

The 'spokewheel' development process of the WHOQOL instrument has been described as the 'gold standard for cross-cultural projects' (Bowden and Fox-Rushby, 2003). However, it is an extremely costly process in terms of time and expertise.

In the following section I discuss the experiences of adapting and translating the WHOQOL-Bref for validation in Bangladesh, which is a shorter version of the original instrument, designed to be more amenable to for use in large-scale research studies or clinical trials.

3.4.2 EXPERIENCES OF ADAPTING AND APPLYING HRQOL MEASURES IN BANGLADESH

The WHOQOL-Bref (World Health Organisation, 1996) is a generic HRQOL measure which has been translated and adapted for use in Bangladesh. While the WHOQOL-100 was considered for adaptation by Nilsson et al (2005) in a study of quality of life of elderly Bangladeshis, they deemed it to be unsuitable due to its length, the complexity of the 5-point response scale, and the inclusion of items concerning sexual functioning. The WHOQOL-BREF consists of a subset of 26 items taken from WHOQOL-100, organised into four domains (physical, psychological, environmental and social interaction) and in addition one each for overall QOL and overall health status.

Several studies have sought to develop and validate a 'culturally valid' version of the WHOQOL-Bref for use in Bangladesh (Izutsu et al., 2005; Tsutsumi et al., 2006). The development of the Bangla WHOQOL-Bref was achieved by first translating the existing English version of the instrument using 'two experienced health workers', bilingual in Bangla and English, working independently. The initial translations were independently back translated and reviewed by two 'highly experienced' doctors after which revisions were made.

Izutsu et al. (2005) sought to assess the reliability and validity of the WHOQOL-Bref with an adolescent population (consisting if boys and girls aged 11- 18 years) representative of Dhaka (the capital) in Bangladesh. In total, 187 boys and 137 girls from residential areas, and 157 boys SD 2.1) (13.4 ± SD 2.1) from slums in Dhaka were interviewed using a questionnaire, which included a Bangla translation of the WHOQOL-Bref. Thirty-eight randomly selected adolescents from the original interviewed group were re-administered the same questionnaire one week later. On the whole, the Bangla version of WHOQOL-Bref showed good internal consistency and test–retest reliability. In comparisons between residential and slum areas, discriminant validities were observed in the total and environmental domain of both genders (respondents residing in slums having lower scores) and in the social relationship domain of males. Furthermore, discriminant validities of

physical and psychological domains were observed in gender comparisons. These results suggest that the Bangla version of WHOQOL-Bred is valid and reliable in assessing the quality of life of adolescents in Bangladesh.

In another study (Tsutsumi et al., 2006) 200 adults in the Dhaka district were interviewed using a questionnaire containing the Bangla version of the WHOQOL-Bref, as well as questions related to sociodemographic data. To assess the reliability of WHOQOL-Bref, Cronbach's alpha was calculated, and test-retest reliability was evaluated using the intraclass correlation coefficient (ICC)[38] of the first and second administrations. For comparison, approximately 200 leprosy patients were also interviewed with the questionnaire to examine the discriminant validity between groups.

Scores for the social relationships domain were lower for male leprosy patients, however they were not significantly different for female leprosy patients compared to the general population. Leprosy sufferers scored higher for the environmental domain, compared to the general population, resulting from higher satisfaction scores for 'access to health services' and 'transport'. The researchers explain that these higher satisfaction scores are a result of the free health care and medical treatment provision that is provided to leprosy patients in Bangladesh. On the whole, sufficient validity was observed, and the Bangla version of the WHOQOL-Bref was deemed to be valid and reliable in assessing the quality of life of an adult population in Bangladesh.

Zeldenryk's (2013) study differs from the studies described above as they used cognitive interviewing techniques (e.g. Barofsky et al. 2003, Willis 2005) to examine whether the items of the WHOQOL Bref are conceptually and linguistically relevant to a rural village population in Northern Bangladesh. The study participants were 34 individuals living with lymphatic filariasis[39] stratified by age, gender, education level and location. An emergent probing method was predominantly used in the interviews; in this method of cognitive interviewing interviewers are instructed to ask probing questions which they think are suitable as the need arises[40] (for instance when the respondents pauses, or when their body

[38] The intra-call correlation coefficient (ICC) describes how strongly units in the same group resemble each other. unlike most other correlation measures it examines data structured as groups, rather than data structured as paired observations.

[39] Lymphatic filariasis, is a parasitic disease transmitted by mosquitos. Infection is usually acquired in childhood and results in hidden damage to the lymphatic system. Visible manifestations of the disease, which include swelling of the limbs, urogenital, and breast regions leading to permanent disability appear later in life. The condition is painful and severely disfiguring.

[40] Traditional probing interview methods rely upon asking respondents specific often pre-prepared questions. Probing methods are regarded as interviewer driven in contrast to 'think aloud' methods, and thus less burdensome for participants (Willis, 2005)

language or facial expression indicates confusion or discomfort, and when questions are answered in an unexpected manner). Think aloud questioning (Willis, 2005), which requires the respondents to literally 'think out loud' and is believed to be less susceptible to bias, was initially trialled but found to be too burdensome and confusing for the respondents who were largely uneducated and unfamiliar with the format of a questionnaire.

The participants consisted of males (53%) and females, the majority of participants (19/34) were aged between 31 and 50 years of age, almost half of the participants had received no education and 85% of them resided in a rural location. The interviewers were trained in the meaning and interpretation of the WHOQOL-Bref questions and had an understanding of the local culture and language having lived in the community for some time prior to the commencement of the study. This meant that the research teams were able to identify independently, and in consultation with local experts (i.e. local doctors and nurses) potentially problematic questions in advance. The main problems identified in advance were questions that were seen as too formal in language, the interviewers felt that many of the questions could have been phrased in simpler language.

From the cognitive interviews 22 of the 26 questions in the tool were found to be problematic (i.e. more than 15% of the respondents had difficulty with them) so that only four of the questions were suitable for use with the study respondents. The majority of participants found the language tool to be overly formal, and had difficulty with individual questions in terms of their wording and conceptualization. Issues with translation appeared to affect the interpretation of several questions, and certain concepts in the questions were either unfamiliar or not relevant to the rural respondents. For instance, the term 'physical environment' which had previously been noted as problematic by the interviewers as it was a term used only by the 'highly educated' was not understood by 82% of the respondents. Other examples, include the broad term 'transportation', which is not in common usage in this rural population, and as a result was not understood by the poorer respondents, who are more likely to use specific words such as 'rickshaw'. Issues that indicate that there were problems in the actual translation of the questionnaire, for instance when asked how meaningful their lives were, the word for 'meaningful', was misunderstood by 67 % of respondents, many of whom understood the word as meaning 'value', in terms of monetary value. Several concepts contained in the questions were not relevant to the respondents, and as a result were not easily understood, for instance female respondents who did not attend school had difficulty with the concept of 'friends', in the question regarding 'support from friends' as they only associated with family members and neighbours and had no or little experience of forming lasting friendships with school mates.

Based on the findings from this study the authors conclude that the WHOQOL –Bref in its present form is not culturally or linguistically suitable for use in a rural population in Northern Bangladesh, particularly poorer respondents. The authors caution that the findings from this study are particular to the population in which the fieldwork was conducted and that the findings cannot be generalized to other populations and regions in Bangladesh without similar testing. The implications of this careful study of the adaptation of a widely used measure are that despite the concerns about comparability discussed earlier, 'native' scales may offer considerable advantages over generic ones, as I outline below.

3.4.3 THE DEVELOPMENT OF A 'NATIVE' SCALE: THE WeDQoL BANGLADESH, AN INDIVIDUALISED MEASURE OF WELLBEING

Many of the issues and difficulties that are encountered with the translation and adaption of instruments can be countered by the development of 'native' scales. As stated earlier there are few examples of QoL measures which have been developed within and for use in developing contexts. One initiative is that of the WeD project which is discussed here.

An output of the ESRC WeD project was an instrument to measure subjective quality of life, the WeDQoL (Yamamoto 2008; Woodcock et al. 2009). In developing the WeDQoL, WeD sought to bridge the distinction between perceived wants and needs. The development of this instrument was guided by the definition of subjective quality of life as 'the outcome of the gap between people's goals and perceived resources… in the context of their culture, values, and experiences of un/happiness' (Woodcock et al. 2009: 137).

The WeDQoL questionnaire was developed with the aim of obtaining scores reflecting not only the general perspective of people in each country, but also capturing the priorities of *each individual* completing the measure, by taking account of their particular geographical and societal position. In order to achieve this, a questionnaire with a common format, but with items reflecting the quality of life priorities of people in the particular country was developed. In contrast to the WHOQOL, an *emic* approach was utilised for item selection; the list of goals for inclusion in the WeDQoL was developed by asking respondents in the study communities in the four countries of Ethiopia, Bangladesh, Peru and Thailand, a series of questions regarding what was needed to be happy or to live well. I will describe this process using data from Bangladesh. During the grounding phase a representative sample of individuals in each research site had responded to semi–structured interviews and focus groups questions on the characteristics of households and individuals living well or living badly; individual experiences of happiness and unhappiness; individual hopes and fears; and finally, people's views on what constitutes an ideal village or community (Choudhury 2005). A 49 item goals instrument was constructed from this data. The two scales that were developed asked respondents to indicate whether each item in the list was 'necessary',

'necessary' or 'not necessary' to be happy, and also asked them whether their satisfaction with respect to each item was 'satisfied', 'so-so', 'not satisfied' or 'don't have'. The final item set of the WeDQoL consisted of 40 core items which were included in the measure for all 4 countries in the study, in addition to 9 country specific items which were included as they were deemed to be necessary by the team in Bangladesh. These included salaried job, which has the connotations of being potentially a position of authority and respect, and providing a regular steady income, as well as status and thus influence in the *samaj* (community).

In Bangladesh 373 respondents aged 14-89 years (mean 33.93, sd 14.92); 193 men, 180 women completed the 49-item goals scales WeDQoL by interview. The respondents rated (0-2) the perceived necessity for wellbeing of 49 goals (goal necessity), then rated (0-3) their satisfaction with the same goals (goal satisfaction). Individualised average weighted scores possible range 0-6) were derived by multiplying the importance scores by satisfaction scores and calculating the mean (Woodcock, 2007) I discuss the advantages and disadvantages of weighting in the following section.

Validity testing of the WeDQoL instrument focused on assessing construct validity[41] (utilising principal component analysis), and known-groups validity[42] was also examined by looking at variations in scores across demographic groups (see Woodcock 2007). The data from the goal attainment scores was factor analyzed to identify the underlying constructs. The analysis was repeated, and the solutions examined to identify a solution with the smallest number of unique factors, which also made sense in the cultural context. This was achieved by sharing the solutions with researchers in Bangladesh who were familiar with the contexts and the data from qualitative interviews that had previously been conducted with respondents in the study sites. Further psychometric analyses were conducted to determine the internal reliability of the scales obtained in the previous step. However, test-retest reliability and responsiveness of the measure was not assessed as data was only collected on one occasion.

The fact that the WeDQoL was designed with the aim of being applicable to both males and females, in different locations and life stage, and across four different countries may have meant that there were items pertinent to one gender, or to a particular context, which may have been omitted. It is also likely that within the pool of items included in the measure a proportion of the items were of greater relevance to a certain group.

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[41] Construct validity is the degree to which a test measures what it claims, or purports, to be measuring.

[42] Known groups validity is the extent to which a measurement is sensitive to differences and similarities in various groups (e.g., men and women).

For example, based on univariate analysis of the importance of the 49 items initially included there were two items (jewellery and non-governmental services) which were of greater importance to females, in contrast there were 10 items (including having their own transport, participation in local organisations and personally holding a position of authority) which were of greater importance to men.

Further examples of items that may have been omitted are revealed when considering the data collected during the exploratory phase e.g. during the exploratory work women made a distinction between household incomes and personal incomes, as personal incomes enabled them to make discretionary purchases for their children, or offer support to their paternal home.

3.4.4 CONCLUSION

In this section I first discussed the cross-cultural application of HRQOL measures. The predominant approach has been to translate and adapt existing instruments, originally developed for use with Western populations in the English language. Any successful translation of an instrument requires conceptual equivalence and respondent acceptance. The development of the WHO's two generic HRQOL instruments (the WHOQOL-100 and the WHOQOL-Bref) is cited as an example of the successful development of cross-cultural instruments, although given the scale of the undertaking the items could not be developed inductively in relation to specific contexts. Demonstrating the validity of existing adapted measures is predominantly reliant on statistical and psychometric evidence. Studies employing this approach have largely concluded that the WHOQOL-Bref Bangla instrument as valid and suitable for use with the adolescent and adult Bangladeshi populations (Izutsu et al., 2005; Tsutsumi et al., 2006). But adaptations and translations of existing measures for application in different countries, other than the country of development of the measure, also necessitate examination of the appropriateness of the concepts included in question, the language and the levels of difficulty, bearing in mind the cultural context and other issues such as educational attainment of the target respondents (Collins, 2003; Jobe and Mingay, 1991). For this reason a further study by Zeldenryk (2013) employing cognitive interviews concluded that the instrument is not culturally or linguistically suitable for use in a rural population in Northern Bangladesh, particularly with poorer populations. The authors also emphasise that their findings cannot be generalized to other populations and regions in Bangladesh without similar testing.

The findings from this group of studies illustrate the limitations of statistical approaches for demonstrating the applicability and validity of instruments when translated and adapted. The need for qualitative approaches to assess conceptual equivalence is paramount, supporting the importance of cognitive interviews in pretesting translated QoL measures. The methods

employed in cognitive testing must also be considered in light of the abilities of the study respondents (in this instance ‘emergent probing’ methods were found to be more appropriate than ‘think aloud’ approaches).

There are considerable differences in culture, language and development throughout the regions of Bangladesh. The findings from these validation studies demonstrate the difficulties of developing ‘universal’ instruments for application in different regions and with different populations within a nation. A broad QoL of life instrument cannot be a completely accurate measure unless it reflects local understandings of wellbeing, necessitating qualitative and participatory work during the development stage.

A further issue that is widely overlooked, and which was not addressed in these studies, is the need for research assistants to complete the instrument on the behalf of the respondents due to the low levels of literacy in Bangladesh, thus there are concerns regarding the accuracy of responses particularly considering the varying response scales that are used within these instruments. The use of interviewers also exacerbates the issue of response biases, particularly social desirability bias and acquiescence bias. The presence of onlookers should also be considered as this is a common feature of research in Bangladesh.

I also discussed the development of a ‘native’ or emic scale of wellbeing, the WeDQoL Bangladesh. The development of ‘native’ scales is thought to circumvent many of the issues that arise when adapting ‘universal’ scales. The scale was developed drawing on the findings of qualitative and participatory work to elicit understandings of wellbeing in Bangladesh. As a result, the content, and language of the WeDQOL-Bangladesh are more likely to be relevant and appropriate for Bangladesh, even though the measure was also intended to work across three other developing countries. However, there are indications that the content of the instrument may have been of greater relevance to males and many aspects of life which are relevant to women’s QoL will have been omitted. The WeDQoL- Bangladesh instrument thus represents a male perspective on wellbeing. This has implications for the accurate measurement of wellbeing; women will be more likely to score lower than men, and this will be exacerbated when weighted scores are used.

In the case of broader measures of QoL encompassing social and cultural factors, the experiences of men and women at different life stages differ significantly. A gender specific measure of QoL such as the Bangladesh Goal Attainment scale BGA will mean that the content of the instrument will be more relevant to the particular group targeted i.e. women of age 20-45 years in Bangladesh, resulting in improved measurement of women’s QoL.

4 DETERMINANTS OF SUBJECTIVE WELLBEING

In this chapter I review the extensive body of research that has sought to identify the factors which have been found to be strongly associated, perhaps causally, with happiness or subjective wellbeing. Although the vast majority of this research has been conducted in developed or Western contexts, it needs to be reviewed. The subject is of great interest to researchers and policy makers in developing countries as an understanding of the diverse factors that may contribute to wellbeing (or indeed ill-being) is important for determining how, and to what extent, circumstances can be improved.

Review of this literature is complicated as key terms such as subjective wellbeing and quality of life, and happiness and life satisfaction are used interchangeably. My review identifies certain ambiguities in the evidence arising from this.

As in any body of literature there are agreements and disagreements, however there are significant convergences around key themes such as income and employment. It is important to acknowledge these because of their global relevance, but it should be recognised that they will have a differing relevance in developing settings and Bangladesh.

The issues with the existing literature suggest that a gender, age (or life stage) and context specific assessment of perceived quality of life, such as the Bangladesh Goal Attainment instrument, is important and can make an important contribution to the global debates outlined in this review.

4.1 ORGANISATION OF CHAPTER

Although this chapter reviews literature concerning happiness, life satisfaction and subjective wellbeing, which are very different constructs to the one underpinning the Bangladesh Goal Attainment measure, this review is relevant to the objectives of my thesis because it draws out the complex linkages of factors and processes underpinning judgements of subjective quality of life. The chapter is organized as follows:

- Section 4.2 concerns conceptual and methodological issues that should be considered whilst reviewing this body of research and determining its applicability to the context in which I am working.
- Section 4.3 focusses on the relationship between *income and subjective wellbeing* and the apparent disjuncture between the objective (i.e. the presence/absence or amount of income) and the respondent's subjective evaluation of their life.

Explanations for the counter-intuitive findings, including the influence of psychological processes (e.g. adaptation and social comparisons), are discussed

- Section 4.4 examines the socio-demographic determinants of SWB through a gender lens, and the explanations provided for any differences. The aim is to better understand how men and women, at different stages of life, vary in their experience and achievement of wellbeing.
- Section 4.5 is a summary of the relationship between selected population variables and SWB
- Section 4.6 looks at the relationship between *culture and subjective wellbeing,* and critiques
- Section 4.7 I discuss the usefulness of subjective assessments of wellbeing to policy makers in light of the influence of psychological processes or biases.

A wide range of factors or determinants of happiness, which encompass factors measured at both the individual and the population level, have been identified in the literature. These can be categorised as follows (adapted from Frey and Stutzer, 2001):

(i) *Economic factors*, which include individual and aggregate income, levels of unemployment, and inflation.
(ii) *Socio-demographic factors*, such as age, gender, marital status and educational attainment.
(iii) *Situational or contextual factors*, this is a broad category which encompasses interpersonal relationships (within the family, with friends,or community members, living conditions, health status, and culture and norms.
(iv) *Institutional factors*, such as political systems and opportunities for participation.
(v) *Personality and genetic disposition factors*, personal control, optimism, extraversion, neuroticism, self-esteem, and early life experiences.

These categories can be organised further as 'bottom-up' or 'top-down' influences on SWB (Diener, 1984). Categories (i-iv) are 'bottom-up' or contextual influences and are broadly comprised of the events and circumstances of a person's life. Theories of life satisfaction or SWB which adopt a 'bottom-up' perspective (Andrews and Withey, 1976; Campbell et al 1976) explain that an individual's satisfaction with life is strongly determined by the objective conditions of their life. When forming a judgement of their overall life satisfaction, an individual will review the objective conditions of their life in a range of life domains i.e. financial, family, social, work etc. and taking into consideration the relative importance of each domain, will sum up the evaluations to reach an overall evaluation. The 'top-down' perspective, on the other hand (Diener, 1994), contends that 'structures within the person', i.e. personality and genetic disposition (category (v) above), determine how

events and circumstances are perceived. In addition, each individual's wellbeing, in general, varies within a range around a 'set-point' level of SWB. As a result 'bottom-up' factors account for a smaller proportion of the variance in self-reports of SWB than 'top down' factors (Diener et al., 1999). For example, in a landmark study conducted in the US, Andrews and Withey (1976) concluded that only about 10% of the variance in life satisfaction can be accounted for by socio-demographic characteristics. Later reviews have suggested slightly higher estimates ranging from 15% to 20% (Argyle, 2003; E. Diener, 1984).

4.2 COMPLEXITIES OF THIS BODY OF LITERATURE

Before I look at the substantive findings from this body of research, there are several methodological issues that should be considered as these may affect the extent to which they are transferable to the context in which I am working. Summarising this vast body of research work is difficult, due to the diverse terminologies and concepts that have been used. Earlier studies appear to be dominated by measures of happiness (hedonic or affective wellbeing); more recent studies have used measures of life satisfaction (evaluative wellbeing). Moreover, many authors appear to use the terms happiness and satisfaction interchangeably. The importance of the distinction between happiness and life satisfaction is illustrated by the differing results obtained when different components of subjective wellbeing are measured. For example, Kahneman and Deaton (2010), revisiting the question "Does money buy happiness?", concluded that in the United States, increases in incomes and education did result in higher levels of reported life satisfaction, which is an evaluative measure; however the relation did not hold for happiness (or measures of affect), which instead was found to be more closely correlated with health, care-giving, and loneliness.

An added complexity is variation in how the constructs of happiness or life satisfaction have been measured. For example, in the case of happiness or affect, considering the affect balance (negative affect subtracted from positive affect) is inadequate. In order to fully assess wellbeing it is necessary to collect information on experiences of both positive and negative affect, and moreover to also analyse them separately, as they represent two different dimensions, and are related to different life events (Watson et al., 1988).

Variation in the specific aspect of subjective wellbeing that is being measured, and how it is being measured, is also of significance when considering differences in levels of subjective wellbeing between genders and by age groups. There are indications that men and women vary in their experience of mood and emotions and that there is also variation with age. The significance of this is considered further when discussing differences in SWB by gender, and by age in section 4.4

Another issue that arises in reviewing this literature include the fact that many of the factors (particularly in the case of socio-demographic factors) impacting subjective wellbeing are inter-related. There are many instances where predictors or correlates, which have been found to be bivariately[43] associated with life satisfaction, do not have an effect when other variables are included. Even where strong associations between wellbeing and its assumed contributing factor are established, as much of this research is based on cross-sectional studies rather than panel studies[44], determining the direction of causal links is a challenge. Many of the variables described by previous researchers as causes of SWB are in fact merely correlates, and could just as well be a consequence of SWB. For instance, experiencing good relationships may contribute to a person's wellbeing, but experiencing high levels of wellbeing may mean that a person is more likely to be able to form meaningful personal relationships.

Moreover, the findings need to be interpreted with care, as the majority of this empirical work has been focused on populations residing in developed or industrialised Western countries. Furthermore, many of these studies rely on samples of college or university students, which is further likely to exclude poorer and disadvantaged sections of the population.

Where pertinent I draw on the literature in Bangladesh to explain how these determinants impact on the wellbeing of women.

4.3 ECONOMIC DETERMINANTS – DOES MONEY INCREASE HAPPINESS?

4.3.1 THE GOAL OF ECONOMIC PROSPERITY

Economic prosperity is a common goal for both individuals and policy makers throughout the world. It is assumed that economic growth means increased consumption, improved public services, improved health status (which include life expectancy, reduced childhood mortality and malnutrition) and reduced unemployment and poverty. In short, the assumption is that economic growth results in improvements in people's lives. It should be borne in mind that the direction of causation in many of these cases is debated; for instance, at the macroeconomic level, while per capita GDP is positively related to life expectancy, empirical studies have also shown that health improvements provide a significant boost to economic growth in developing countries (Bloom and Canning, 2000), through increased

[43] Bivariate analysis simply means the analysis of the relationship between two variables.

[44] Cross-sectional surveys are based on a sample of the population of interest drawn at one point in time. In contrast, panel surveys (or cohort studies) follow the population of interest over an extended time period and are concerned with measuring change over time.

work force participation and worker productivity, as well as improved learning (e.g. enhanced early childhood development as a result of better nutrition) (Bloom et al. 2007; Bloom et al. 2010). At the individual level, personal wealth has been linked to many positive outcomes in life (Furnham and Argyle, 1998). People with higher incomes have better health and mental health outcomes and enjoy greater longevity (Wilkinson, 1990), as well as lower rates of infant mortality (Smith, 1996); and experience fewer stressful life events (Wilson, 1995). Once again, the direction of the relationship is debated, for instance an individual's mental health may be determining their ability to work, and thus their income.

It is not surprising then that there is a great deal of interest in the relationship between income and subjective wellbeing, and this is particularly important in reflecting on the most appropriate intervention in any given setting. Nonetheless, despite several decades of research, the question of whether objective improvements in the material conditions of life, leads to enhanced levels of happiness and subjective wellbeing is far from resolved (e.g. Diener & Seligman 2004; Fischer & Boer 2011). Added to this are findings that, in terms of personal incomes, money accounts for a very small proportion (less than 4 per cent) of the variance in SWB in developed countries (Inglehart & Klingemann 2000; Diener et al. 2003). A further complication are findings that the relationship between income and subjective wellbeing differs depending on the particular component of SWB that is being measured. For instance, Kahneman and Deaton (2010), reported that although increased incomes were linked to higher life-satisfaction (defined as a general positive evaluations of life overall), the link between increased earnings and day-to-day emotional well-being (which they defined as the day-to-day experiences that make life pleasant or unpleasant) was far weaker. Increased incomes are concomitant with a greater sense of security about the future, which represents a more stable orientation towards life resulting in greater life satisfaction. Happiness, on the other hand, is less stable and subject to mood changes which may arise from day-to-day matters.

In this section I review the empirical evidence regarding the relationship between income and subjective wellbeing. I will be considering the findings relating to income both at the population level and at the individual level.

The body of research examining the relationship between income and subjective wellbeing is vast and complex. Studies examining the relationship between subjective wellbeing and income differ in terms of the level of comparison, attempting to answer one or more of the following questions:

(i) First, at the individual level (i.e. in terms of personal incomes): *are richer people happier than poor people?* That is, studies examining the relationship between SWB or happiness and income for each individual in a country.

(ii) Second, at the country level: *are richer countries (e.g.in terms of per capita GDP) happier than poorer countries?* In other words, studies examining differences in average subjective wellbeing between countries at different stages of economic development.

(iii) And thirdly, again at the country level: *do countries become happier as they grow richer?* Or studies which compare how the levels of average subjective wellbeing of a country change over time, with changes in economic development.

The findings from the individual level are relevant to the aims of my thesis in order to understand how much income contributes to people's wellbeing and the limitations of money-metric indicators as a measure of individual wellbeing. The findings at the country level also illustrate the weaknesses of evaluating societal wellbeing on the basic of economic performance and growth.

4.3.2 DOES ECONOMIC GROWTH IMPROVE WELLBEING

The title of this sub-section is taken from Easterlin's seminal article in which he sought answers to all three of the questions set out above, concerning the relationship between income and subjective wellbeing. Based on the analysis of data sets from a total of 19[45] diverse countries which he described as 'developed and less-developed' Easterlin (1974) concluded that income did not matter for happiness.

Easterlin found that *within a given country* people with higher incomes were more likely to report being happy[46], however this does not hold at a national level, i.e. wealthier countries in terms of per capita GDP were not more likely to be happier than poorer ones, creating an apparent paradox. He reported data that showed happiness was not significantly associated with per capita GDP, among developed nations. Examining trends *within nations*, he reported that the increase in income in the United States between 1946 and 1970 had been accompanied by flat levels of reported happiness, and even declines during 1960-1970. These apparent differences between nation-level and person-level results, which have come to be known as the Easterlin Paradox, have been the subject of ongoing research and debate. Easterlin's Paradox challenges conventional wisdom by suggesting that improving the material living standards of living within a nation in terms of absolute income, will not contribute to improvements in subjective wellbeing at the societal level. The implications of this are far reaching- if absolute income has little impact on people's wellbeing it implies that economic development should not be the primary policy objective of any government.

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[45] The countries included in Easterlin's analysis were as follows: US., Cuba, Egypt, Israel, W. Germany, Japan,

[46] The data was taken from a poll of 1,517 people in the United States in 1970 throwing into question his original findings.

In the next section I will re-examine Easterlin's findings in relation to the three questions set out above, with reference to more recent empirical findings, and discuss the explanations and implications of these findings.

4.3.2.1 WITHIN-COUNTRY COMPARISONS- ARE RICHER PEOPLE HAPPIER THAN POORER PEOPLE?

Easterlin (1974), concluded that, within a nation, richer individual are happier than poorer ones[46]. This conclusion has not been disputed by subsequent studies; numerous studies using survey data from diverse countries have reached the same conclusion finding small but significant correlations between income and SWB (e.g. Diener et al., 2003; Diener and Biswas-Diener, 2002). More recently, Sacks, Stevenson, and Wolfers (2010) analyzed the relationship between life satisfaction and income in the 25 countries with the largest populations and found that in all of them there was a clear positive relationship between life satisfaction and income with no indication of satiation, so the more income people have, the happier they are.

Regarding the strength of the relationship, Diener and Oishi (2000), comparing 19 nations[47] (at differing stages of development), found a mean correlation between individual income and SWB of 0.13. Lachman and Weaver (1998) found similar results in a study of the United States (0.18).[48]. These results suggest that other factors, apart from personal income, are of more importance in explaining the differences in happiness between people. The strength of the relationship between personal income and subjective wellbeing has been found to differ depending on a country's overall level of wealth. Veenhoven (1991) noted stronger within country correlations between individual income and wellbeing in poorer countries i.e. income gains in poorer countries are associated with larger increases in life satisfaction. Biswas-Diener and Diener (2001) supported this by reporting a correlation of.45 between personal income and SWB when analyzing a sample focused on very poor areas in Calcutta, India, compared to only 0.13 in the USA. Oishi et al 1999 also observed that in developing countries financial status was a stronger predictor of life satisfaction than satisfaction with home life. Several explanations have been offered for such observations. One explanation is that within poorer countries the difference between the better off and the poor is larger than that found in wealthy countries, which results in the stronger correlation between income and SWB (Veenhoven 1991). In addition, Veenhoven (1991) explains that

[47] The countries included in Diener and Oishi's study came from the Word Values Survey and included the following: Argentina, Austria, Brazil China Denmark, Estonia, Finland, Hungary, Italy, India Japan, Nigeria, Norway, Portugal, Slovenia, South Africa, Spain , Turkey and the U.S.

[48] In both these instances, the large sample sizes increase the likelihood of finding a statistically significant relationship.

in a context of considerable deprivation and limited provision of government services, money is important to SWB as a result of it being crucial to the fulfilment of basic needs such as food, housing, basic services and clothes.

The findings suggest that the overall within-nation income-SWB correlation is small. The association of these two variables is non-linear, with a stronger relationship at lower levels of income.

4.3.2.2 LONGITUDINAL STUDIES -DO COUNTRIES BECOME HAPPIER WITH ECONOMIC GROWTH?

The strongest argument for Easterlin's Paradox, came from his findings that there was no link between a nation's economic development and its average level of happiness. This assertion was based on time-series data for happiness in the United States in which he did not find evidence of an increase in happiness during a period when national income had grown considerably. Subsequently, Easterlin (2010) has cited the example of Japan where levels of SWB have remained level even though there had been a five -fold increase in per capita GDP during the same period (1958-1986).

Easterlin (1995) also explained his findings suggesting that while economic growth does have a positive effect on happiness with other things being equal; it also raises material aspirations, sometimes more quickly than income. This means that individuals require more money to be satisfied, resulting in SWB levels being flat or even declining despite rising incomes.

Although this argument is plausible, the longitudinal evidence cited by Easterlin (1974) is criticized as it was based on the analysis of data from a small group of industrialized nations. Stevenson and Wolfers (2008) also refute the idea of rising aspirations, or adaptation, citing findings of a positive, linear correlation between SWB and log income for countries at various stages of development. Whether absolute income or log of income should be the indicator of interest requires more study.

4.3.2.3 BETWEEN-COUNTRY COMPARISONS - ARE RICHER COUNTRIES HAPPIER THAN POORER COUNTRIES?

Analyses of the second question, i.e. whether richer countries are happier than poorer ones has generated more contentious results. Easterlin (1974) had originally asserted that rich countries do not tend to be happier than poorer ones based on analysis of the limited data available to him at that time.

Subsequent studies, benefitting from the availability of greater data, show that there is a clear positive relationship between average levels of happiness and levels of economic development across countries. For instance, Diener and Biswas-Diener (2002) reviewed a number of studies that report correlations in the ranging from .60 to .70 between the wealth of nations and their mean levels of SWB. Stevenson and Wolfers (2008) have presented findings based on analysis of improved data-sets that show that there is a positive relationship between average life satisfaction and the log[49] of GDP per capita, which leads them to the conclusion that there is a diminishing marginal utility of income, i.e. there is a 'threshold' level of income beyond which income does not have impact upon happiness levels (Veenhoven 1991). Stevenson and Wolfer's findings are consistent with the suggestion that income matters for happiness until basic needs are met. Myers (2000), analyzing data from the World Bank and the 1990-1991 World Values Survey, suggest that after GNP per capita reached $9,500, the correlation with SWB decreases and that further increases in GNP per capita have a diminishing impact on happiness. This would reflect the fact that people in less developed nations are initially more concerned with economic growth, however on attaining a certain level of income, at which basic needs have been met, people become more concerned with other aspects of their life such as their relationships, family life and even protecting the environment (Inglehart, 2000). Alternatively, growth in GDP is accompanied by rises in objective indicators of "bads" that lower quality of life, such as higher levels of pollution and, beyond a certain income threshold, lifestyle related illnesses such as obesity (Easterly 1999).

The direction of a causal relationship is open to debate because of the cross-sectional nature of these studies. It may be that societies which are happier are those that are more productive, resulting in higher economic output. Frey and Stutzer (2001, p. 75) caution that the positive relationship between income and happiness, may arise from other factors. For instance, countries which have higher per capita incomes are also more likely to be stable democracies compared to poorer countries, as well as having better levels of human rights, health, and more equal income distribution.

[49] The log, or logarithm, of a number is the exponent to which another fixed number, the base, must be raised to produce that number.

4.3.3 FURTHER EXPLAINING THE RELATIONSHIP BETWEEN INCOME AND SUBJECTIVE WELLBEING:

Several explanations have been put forward to explain Easterlin's findings[50] that in spite of increases of income over time, people do not report increasing levels of happiness.

One group of explanations centres on variables that may moderate or mediate[51] the relationship between income and SWB. A second group of explanation cites psychological processes such as adaptation and social comparison.

Mediating and Moderating variables in the relationship between income and SWB

Several studies have sought to investigate moderator or mediator variables which contribute to the complexity of the relationship between income and subjective wellbeing. These influencing variables are diverse and interdependent and include personality traits, values, goals, and behaviours.

A person's attitude towards money, in terms of the value placed on it, may moderate the relationship between income and SWB. For instance, Kirkaldy et al, (1998) reported that SWB and the importance given to money were negatively correlated. Other studies report that people placing greater importance on money compared to other goals are more likely to be less satisfied with their lives (Myers, 2000; Sirgy, 1998). Kasser and Ryan's (1993) work offers further explanation by distinguishing between intrinsic goals and extrinsic goals[52]. In several studies Kasser and Ryan ((2000; 1993, 1996) report that people who pursue extrinsic goals such as financial success and social recognition have relatively low levels of subjective wellbeing. Conversely, people who pursue intrinsic goals, such as personal relationships or self-development, generally have higher levels of wellbeing (ibid.) as they are satisfying inherent psychological needs (i.e. competence, relatedness, and autonomy, and growth (Deci and Ryan, 2000)

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[50] There is also a debate around the variables that have been considered in previous studies supporting the Easterlin Paradox. For example Fischer (2008) argues that that GDP is an unsuitable measure for wealth and household income, and that male wages and average wages are more valid measures. Using these alternative indicators Fischer's findings contradict Easterlins' wealth-happiness paradox.

[51] A simple explanation is that a moderator variable is one that influences the *strength of the relationship* between two other variables, and a mediator variable is one that *explains the relationship* between the two other variables.

[52] Intrinsic goals are inherently rewarding and not dependent on external validation, extrinsic goals on the other hand are sought to attain the approval of others (Kasser and Ryan, 1993)

People's values will influence how they choose to use their income. Dunn, Aiken and Norton (2008, 2014) reported that spending income on others predicted happiness in cross-sectional and longitudinal studies[53] using a U.S. sample. People in less developed countries also benefit from 'pro-social spending'; analyzing survey data from 136 countries it was found that 'prosocial' spending was consistently associated with increased happiness (Aknin et al., 2013). The authors also tested for causality, conducting experiments they found that recalling a past experience of prosocial spending has a causal impact on happiness across countries that vary in terms of wealth (i.e. Canada, Uganda, and India). They explain that spending on others satisfies one or more psychological need (i.e. those of relatedness, competence, and autonomy). People have also been found to derive greater happiness when making 'experiential purchases' (e.g. travelling) compared to the purchase of a material item (Van Boven and Gilovich, 2003). People enjoy the anticipation of the experience, the experience itself, and afterwards benefit from the 'memory capital', which they are able to reflect on resulting in longer-term satisfaction. Experiential purchases are more likely to be associated with forming people's sense of identity and to involve social interaction, again satisfying psychological needs.

Psychological mechanisms and the relationship between income and SWB.

A second group of explanations for the findings regarding the relationship between income and SWB, is centred around psychological processes. These include adaptation (or habituation), social comparisons and rising aspirations; each of these processes is discussed here.

Easterlin's findings have been used to argue that well-being depends upon relative income (the amount of income received relative to others) rather than absolute income (the amount of income received in total). Relative income concerns, in the form of social comparisons (where people compare themselves to relevant others in their reference group), mean that an increase in a person's income will only lead to an increase in their subjective wellbeing if the income increase exceeds that of their reference group, and conversely people will experience a decrease in SWB if their members of their reference group get richer and they do not (Clark et al., 2008). This would explain why people do not appear to be getting happier in spite of societal economic growth. In support of this are findings (from the U.S) that show that controlling for personal income, the income of the reference group is negatively correlated with the respondent's life satisfaction (Luttmer, 2005). Rising aspirations leads to similar dampening effects of income on wellbeing. In China, the rising

[53] Participants were randomly assigned to a group given the task of spending money on others experienced greater happiness than a group given the task of spending money on themselves.

aspirations of rural-urban migrants, in response to their new changed circumstances, meant that although their absolute incomes had increased, they experienced a reduction in subjective wellbeing (Knight and Gunatilaka, 2012, 2010). The findings from China are consistent with Graham and Pettinato's (2001) findings regarding 'frustrated achievers' in Peru. There more than half of those who had achieved the largest income growth (measured objectively) during the last decade, subjectively reported that their economic situation had deteriorated. The importance of social comparisons (or rivalry) for the evaluations that people make of their lives and wellbeing is borne out by findings in Russia and Peru (Graham and Felton, 2005) and in Nepal (Fafchamps, 2003). Eggers et al's (2006) observed that growing unemployment in 2001 correlated with increases in average levels of life satisfaction; this led them to conclude that individuals lower their aspirations or standards, as a result of observing others suffering during a period of economic downturn. A sense of satisfaction is clearly a highly personal and subjective experience and is determined by an individual's current expectations and past experiences, which in turn may be influenced by relative comparisons.

Countries experiencing economic growth, may also become more unequal, this means that individuals in the lower income groups will experience relative deprivation leading to a reduction in subjective wellbeing. Hagerty's (2000) study in which he demonstrated that inequalities in income distribution within a community leads to lower SWB support Easterlin's assertions. Considering inequalities in national income distribution within nations, it becomes apparent that within 'poor' countries, there are considerable differences in the circumstances of persons. Studies in low and middle-income countries have shown that in contexts of poverty, relative income may be a more significant predictor for subjective wellbeing than absolute income (Graham and Felton 2006; Guillen-Royo 2009). Graham and Pettinato (2002) analyzing subjective wellbeing data from 17 Latin American countries and Russia found that relative income differences have robust effects on how individuals assess their wellbeing. They conclude that those in the middle or lower middle-income group are more likely to be dissatisfied than the very poorest.

A second explanation for the contradictory relationship between income and SWB is that there is a process of adaptation (also referred to as habituation) such that people adapt to changes in their circumstances[54]. For instance, in the case of income, a change may initially affect happiness, but people revert to their previous levels of happiness after a period of time (Diener et al., 2006; Lucas et al., 2003). Interestingly, a return to previous levels of

[54] In section 4.7 I discuss the psychological processes of adaptation and the implications of this for the use of subjective measures of wellbeing to guide policy decisions

happiness is more likely to occur when individuals experience increases in their income rather than decreases (Burchadt 2005). An explanation for income adaptation is that people's aspiration levels change (Frey and Stutzer 2002). The satisfaction experienced from the additional material goods and services paid for through extra income, subsides and this makes people strive for higher aspirations. As a consequence, Frey and Stutzer (2002, pp. 78-79) state the following: a) the upward adjustment of expectations makes people want to accomplish more and more and they are never satisfied b) wants are insatiable c) greater opportunities provided by higher income may generate higher aspirations and lower subjective wellbeing d) people tend to think they were unhappy in the past and expect to be happier in the future'.

Findings from different parts of the world reflect this: for instance the rising aspirations of rural-urban migrants in China, in response to their new changed circumstances and proximity to wealthier counterparts, meant that although their absolute incomes had increased substantially, they experienced a reduction in subjective wellbeing (Knight and Gunatilaka, 2010, 2012b). The findings from China are consistent with Graham and Pettinato's (2001) findings regarding 'frustrated achievers' in Peru. There more than half of those who had achieved the largest income growth (measured objectively) during the last decade, subjectively reported that their economic situation had deteriorated. Graham and Pettinato (2001) explained that this was due, in part, to the perception of relative deprivation in a context of high income inequality.

4.3.4 INCOME AND SUBJECTIVE WELLBEING IN DEVELOPING CONTEXTS

Returning to the original questions that were posed:

Within-countries, are richer people happier than poorer people? The strength of the relationship depends on the level of economic development of the country. Within poorer countries there are stronger correlations between individual income and SWB. This has been attributed to the importance of incomes for the fulfillment of basic needs.

Do countries become happier with economic growth? The answer to this question is less clear; Easterlin originally asserted that economic growth within a country would not lead to gains in SWB as a result of rising aspirations. However, more recent analyses based on improved data sets suggest that there is a persistent positive relationship between levels of SWB and log income, which indicates that there is a diminishing marginal utility of income.

Are richer countries happier than poorer ones? Again, based on more recent studies, the conclusion is that richer countries are happier, but again there is a diminishing marginal utility of income. It has been suggested that there is a 'threshold' level of income equivalent to $9,500; the explanation being that less developed countries are initially concerned with

economic growth, on attaining the level where basic needs are met, other aspects of life such as relationships, family life and the environment become more important However the ordering of needs within the hierarchy for developing country contexts has been questioned, e.g. despite material difficulties , respondents are able to derive satisfaction form their relationships and family life (Brinkerhoff et al., 1997; Camfield et al., 2009)

Summing up: income accounts for a small proportion of the variance in SWB scores. There are indications that it is not absolute income but relative income which has a greater effect on SWB scores. The relationship between income and subjective wellbeing is moderated by psychological processes. This raises questions about the appropriateness of relying on income measures to assess wellbeing and guide policy decisions, as well as the use of subjective assessments.

4.4 SOCIO-DEMOGRAPHIC DETERMINANTS OF SWB - THROUGH A GENDER LENS

This section reviews literature addressing the intersection of gender and other socio-demographic determinants of SWB such as age in shaping reported SWB. I will review the evidence for gender differences in subjective wellbeing and the explanations that have been offered as to why these exist. The most compelling explanations relate to the mechanisms such as socialization which reflect characteristics of the cultural and socioeconomic context that influence how men and women experience and express emotions and determine accepted roles and expectations. The main areas in which differences in roles between genders are evident are marriage, employment and parenthood. Accordingly, in the later sections I present the findings regarding the effects of the following socio-economic demographic variables, as these are the most often reported: age, employment status, marital status.

Throughout the world, women are disadvantaged compared to men- be it in terms of incomes, status, authority, and autonomy. The gendered disparities in health, education, and bargaining power within marriage tend to be larger in countries with low GDP per capita (Jayachandran, 2015). Accordingly, we might expect women to consistently have lower levels of subjective wellbeing compared to men, and for women in low income countries to have the lowest wellbeing of all, if we assume a linear relationship between objective indicators and SWB. While some of the earliest studies (Wilson, 1967) concluded that gender was not related to life satisfaction or happiness, the findings from subsequent studies seeking to determine whether women and men do (or do not report) different levels of subjective wellbeing have been mixed. Although there is some evidence suggesting there is a

relationship between gender and subjective wellbeing, and that females do experience higher levels of subjective wellbeing, other evidence points to no gender differences.

Several authors (e.g. (Dolan et al., 2008; Inglehart, 2002) have suggested that in previous research the effect of gender has often been obscured. Gender interacts with many other factors, such as age, giving the impression that men and women have similar levels of happiness and life satisfaction. In acknowledgement of this, there is also a growing body of research examining how various other socio-economic and demographic factors have differing impacts on the levels of subjective wellbeing of individuals depending on gender. The most compelling findings are that gender is related to subjective well-being in interaction with age (Shmotkin, 1990) and that the relationship between gender and subjective well-being is also affected by the cultural context (Inglehart, 2002). While certain factors such as income (discussed in section 4.3)[55] and religiosity (which I discuss later in this section) appear to affect the subjective wellbeing of men and women, at similar ages, in similar ways, there is evidence that other factors such as marital status and employment status do have different effects on an individual's subjective wellbeing depending on their gender and age, or stage in the life-course, and the context.

The general understanding is that the gender differences in the effect of these different factors on subjective wellbeing are a consequence of socialisation which influence and are influenced by prevailing beliefs and norms regarding the different social roles of men and women, in different societies. Gender, together with stage in lifespan, will in fact delineate accepted roles and expectations, within a particular societal and economic context. This understanding reflects that of White (2010, p. 171) who also emphasises the social embeddedness of wellbeing by stating "well-being happens in relationship", in other words when considering the construction of the wellbeing of a person their relationships and the social context which they inhabit are paramount.

4.4.1 GENDER DIFFERENCES IN LEVELS OF SUBJECTIVE WELLBEING

In this section I review the evidence for differences in SWB by gender, before looking at the moderating effect of gender on the relation between other factors and SWB.

A considerable body of research has sought to determine whether there are gender differences in subjective wellbeing, however the results have been largely inconclusive as to whether women and men do (or do not report) different levels of subjective wellbeing. Part of the difficulty in reaching a conclusion arises from the complexity of the construct of

[55] Studies looking at the relationship between income and SWB have largely been conducted taking households as the unit of interest; this means that the differential impact of rising incomes on men and women is difficult to ascertain.

subjective wellbeing; which includes an affective component (including both positive or pleasant and negative or unpleasant emotions), and a cognitive component, consisting of the individual's evaluation of their level of life satisfaction (Diener, 1984), that may be influenced by gender in slightly different ways. For example, there is evidence that gender determines both how people experience moods and their affective evaluations of subjective wellbeing.

Some researchers have concluded that gender is uncorrelated with happiness. For instance Kahneman and Kreuger (2006) reached this conclusion after reviewing previous empirical studies[56]. Other studies which have been cross-national indicate that women consistently report higher levels of happiness than men (e.g. (Blanchflower and Oswald, 2004); at the same time other smaller studies conclude that women are less happy than men (Mroczek and Kolarz, 1998). The findings are similarly mixed for life satisfaction. A recent study found that, in developed countries, women tend to be more satisfied with their lives than men, e.g. Graham and Chattopadhya (2013), while other findings suggest that men and women have similar levels of life satisfaction (Giusta et al., 2011).

Even in the case of findings of similar levels of happiness and life satisfaction between men and women (e.g. Giusta et al, 2011) there are indications that there is greater variation for women compared to men, so women are more likely to report being extremely happy or unhappy than men are (Giusta et al, 2011; Frey and Stutzer, 2002). Frey and Stutzer (2002) explain that this is a reflection of the greater capacity of women for experiencing emotions compared to men, i.e. women are more likely to experience affect (both negative and positive) in greater intensity compared to men, they are also more expressive regarding their experience of these emotions. Wood, Rhodes and Whelan (1989) conducted a meta-analysis which found that when only positive measures of SWB were examined, women were found to report greater life satisfaction and happiness than men. On the other hand in studies that include both positive and negative measures of wellbeing, such as depression men have been found to be slightly happier than women (Haring, Stock, & Okun, 1984; Fujita et.al (1991).

4.4.2 SOME CONSIDERATIONS

In the previous section I discussed some issues which should be borne in mind when reviewing this literature. In addition, when reviewing studies relating to the moderating effect of gender on drivers of subjective wellbeing, we must be aware of the possibility of gender differences being obscured by interactions with other variables above. For example, the effects of age and gender on life satisfaction disappear when marital status is controlled

[56] The sources they cite are: Diener and Suh (1999), Layard (2005) and Frey and Stutzer (2002).

for (Kalpakjian et al., 2011). In fact gender has been described as a 'carrier variable for life context factors such as marital status, education, multimorbidity, and functional capacity that contribute to individual differences' (Baltes and Smith, 2003, cited in Senie, 2013, p. 490). For the purposes of this part of my review I am focusing on studies which have sought to examine how gender moderates the relation with certain variables and subjective wellbeing, with a focus on explanations for these differences.

4.4.3 EXPLANATIONS FOR THE DIFFERENCES IN REPORTED SWB BETWEEN MEN AND WOMEN

Understanding the mechanisms which may result in the differing experiences of subjective and wellbeing for men and women is important for determining whether, and to what extent, the disparity between men and women can be improved. Several mechanisms have been studied to explain the differences observed between men and women in their experience of happiness (and depressive symptoms). These have included biological factors such as hormones, socialisation, and the socioeconomic context.

I have already discussed evidence for gender differences in the experience of affect and in expressivity of emotions (see 4.4.1), so that women experience higher levels of affect intensity and report more experiences of negative emotions, as well as higher levels of happiness (Fujita et al., 1991). Nolen-Hoeksema and (1999) suggest that socialization explains these differences in the experiences and expressions of emotions by men and women, as well as coping styles. Differences in upbringing and dominant norms means that men and women are presented with differing expectations for experiencing and expressing emotions. Men, in many cultures, learn not to experience or express their emotions, as a result of which they are less likely to report experiencing either positive moods such happiness or contentment or negative moods such as fear, sadness, shame and guilt.

Socialisation also explains differences between men and women in their accepted roles and expectations, and so their goals and motivations. This includes ideas regarding the division of roles within the home and the workplace, and wider attitudes concerning matters such as the status of women and gender equality. The degree to which a person behaves in a way that is consistent with prevailing beliefs and norms will be related to their experience of satisfaction. Referring to social comparison theory (Festinger, 1954), a person who behaves in a similar way to other people with similar characteristics, or in a way that is consistent with predominant social norms will experience greater satisfaction; while a person who cannot behave in a way that is consistent with their beliefs or the prevailing social norms will experience cognitive dissonance (Festinger, 1962) resulting in psychological tension and diminished satisfaction.

Indeed, the prevailing cultural attitudes towards gender equality and beliefs regarding gender roles may be more significant than equality in access to resources and opportunities for men and women in explaining men and women's experience of subjective wellbeing. Tesch-Romer et al (2007) analyzed aggregated data of 57 countries from the fourth wave of the World Values Survey (European Values Study Group and World Values Survey Association 2006) and examined whether the degree of gender inequality[57] was related to gender differences in subjective wellbeing in a particular society. Their findings indicated that there was not a clear relationship between gender inequality and differences in subjective wellbeing between men and women within societies. However, the effects of gender inequality at the societal level on gender differences in subjective wellbeing did vary with cultural attitudes *towards* gender inequality. Countries were divided into two categories: countries in which gender inequality in the labour market is widely accepted and countries where gender equality in the labour market is widely rejected[58]. In countries where gender *in*equality was accepted, actual gender equality in the labour market was related to diminished subjective wellbeing in women compared to men. However, in countries where gender inequality is rejected, actual gender equality on the labour market leads to higher feelings of SWB in women as compared to men. Findings such as this indicate that merely widening access to opportunities for women, in terms of employment and income generation, may not result in improvements in subjective wellbeing unless it is accompanied by changes in cultural attitudes regarding the roles of women.

4.4.4 HOW DOES SUBJECTIVE WELLBEING VARY ALONG THE LIFESPAN?

It is well established that gender is related to subjective well-being in interaction with age (Shmotkin, 1990). In this section I review the literature pertaining to the relation between subjective well-being and ageing; or how subjective well-being varies along the life span.

As people get older they experience declines in health, increasing social isolation with the death of partners and loved ones, as well as a decrease in financial standing. Since wellbeing is influenced by the objective conditions of life (such as levels of income, social support, and health), it would be expected that as people get older they will report lower levels of subjective wellbeing.

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[57] The indicator of gender inequality used was one of unequal access to the labour market: Relative Female Economic Activity Rate obtained from the United Nations Human Development Report 2002 refers to the share of the female population (aged 15 and above) who supply, or are available to supply, labour for the production of goods and services (a value of 100 shows equal economic activity rates of both genders).

[58] Agreeing with the statement 'When jobs are scarce, men should have more right to a job than women,' was taken to denote acceptance of inequality. Countries where gender inequality in the labour market is widely accepted are those in which less than 50% of the total population disagreed with this statement; countries where gender inequality in the labour market is widely rejected are those where 50% and more of the total population disagreed with this statement.

However, the research indicates that rather than SWB declining as people age, levels of SWB remain stable (Diener and Suh 1997) or even increase well into later life (Blanchflower and Oswald, 2008; Deaton, 2008; Diener and Suh, 1998). The component of SWB that is being measured is of significance; in general the cognitive aspect of SWB or life satisfaction is positively associated with age, whereas the affective aspect i.e. the experience of both positive and negative emotions was negatively associated with age Diener and Suh (Diener and Suh, 1997) examined age differences in subjective wellbeing in 60,000 individuals in 43 diverse countries and found that, as age increased (from age 20 onwards), life satisfaction increased very slightly, while positive affect decreased slightly. In the case of negative affect it also decreased, but only up to the age of 60 years; for the oldest respondents, those above 60 years of age, negative affect increased slightly[59]. This observation is significant as it gives an indication of how younger and older people differ in their experience of wellbeing. As in the case of the relationships between income and SWB, an elderly person's happiness will be subject to their mood arising from day-to-day matters, whereas the cognitive evaluation of life satisfaction will

Findings of a 'U' shaped relation between age and reported life satisfaction in both developed countries (i.e. US and Western European) and less developed countries (East European, Latin America and Asian nations) are robust. For example, Blanchflower and Oswald (2008) found a U-shaped relationship between age and life satisfaction in over 50 Western European and American samples, and across socioeconomic groups, and were further able to confirm that this finding was not an artefact of cohort effects. Frey and Stutzer (2002) in a meta-analysis also found a 'U' shaped relationship between life satisfaction and age, with the minimum levels of SWB occurring around the 30s and concluded that the 'young and the old are happier than the middle aged' (p 54).

However, Deaton (2008) analysing data from the 2006 World Gallup Poll, a survey which included samples from over 132 countries, concluded that the 'U-shaped' relationship between age and life satisfaction was only present in the richer developed countries, such as the USA, Canada, United Kingdom, Australia and New Zealand; these are countries in which the elderly are relatively satisfied with their life. In the majority of the world, which consists of middle income and transition countries, satisfaction declines with age; the

[59]It has also been suggested that such findings may in fact be an artefact of the particular types of affective emotions that are being assessed. Measures such as the PANAS (Watson et al., 1988) which are predominantly measures of high intensity emotions (e.g. 'active') may indicate that the elderly are low in positive affect compared to younger respondents. On the other hand if low intensity positive emotions were also included in assessments (such as content, happy) it may be seen that the differences in experience of positive emotions between older respondents and younger respondents are smaller. The same is true of negative emotions.

explanation being that in these countries age has a stronger negative effect on health satisfaction, resulting in reduced life satisfaction levels (Deaton, 2008).

One explanation for the findings that older people are happier than their younger counterparts is simply that people who are happier to begin with are those that live longer. Another explanation is that there is a comparison effect: people as they age experience the death of their peers and as a result have a greater appreciation for what they have during their remaining years. Another explanation is that younger people have higher expectations which they are unable to meet leading to a decrease in subjective wellbeing, whilst older people having accepted their strengths and weaknesses, adjust their expectations downwards to more realistic levels, and as a result experience enhanced levels of wellbeing (Frey and Stutzer, 2002). This hypothesis was tested empirically by Cheng (2004), who measured discrepancies or gaps between aspirations and achievements in three areas: material resources, social relationships, and health for older, middle aged and younger adults. The older adults, who reported higher levels of SWB compared to the two younger groups, were found to have smaller discrepancies regarding their material resources and social relationships compared to the younger age groups, but larger discrepancies concerning health. The socioemotional selectivity theory proposed by (Carstensen et al., 1999) offers further explanation and proposes that older people who perceive time boundaries prioritise present oriented goals relating to achieving emotional meaning, whereas younger people prioritise future-oriented goals aimed at acquiring knowledge and widening their prospects (Carstensen et al., 1999). Another perspective is that older people simply adjust the content of the goals for what is attainable over what is unattainable ('content effects' (Taylor, 2014, p. 250), in order to enhance their SWB). The adjustment of goals may also arise as a result of social conditioning; people's aspirations are determined by the prevailing values delineated by society and family members – what some authors such as Qizilbash (2007) have described in terms of false consciousness.

These differences mean that older people are more likely to pursue emotionally satisfying relationships and experiences (thereby satisfying innate psychological needs), compared to younger people who are more likely to sacrifice their immediate emotional needs to pursue future-oriented goals (English and Carstensen, 2014). This means that even though older people experience adverse events (such as bereavement, loss of status and reduced incomes from retirement, and declines in health), they are able to maintain, and in some cases increase, their levels of wellbeing by focussing on a select set of emotionally satisfying social relationships and experiences. In other words older and younger people differ in their goal priorities and motivations, and this in turn means that there are differences in their construction of wellbeing. , which impacts on their satisfaction of psychological needs.

4.4.4.1 OLDER WOMEN ARE UNHAPPIER THAN MEN

When gender differences are considered the 'U' shaped relationship for subjective wellbeing over the life course is not found (e.g. Marcelli and Easterlin 2005). A number of researchers (e.g. Dolan et al., 2008; Inglehart, 2002) have stated that in previous research gender related differences in subjective wellbeing have been obscured by the interaction effect between age, gender and wellbeing leading to the misleading findings of men and women having similar levels of happiness and life satisfaction.

If age is considered it appears that women, particularly older women, are worse off than men when it comes to subjective well-being. In a meta-analysis of over 300 empirical studies (Pinquart and Sörensen, 2001) examined gender differences in happiness, life satisfaction and self-esteem it was found that older women were more likely to report lower levels of subjective wellbeing than men. Based on additional analysis they found that physical health, competence and socio-economic status influenced the gender differences in subjective wellbeing, leading them to conclude that the lower levels of subjective wellbeing reported by older women arise from the accumulated disadvantages that they experience in terms of higher levels of morbidity, diminished material resources and social disadvantage (Pinquart and Sörensen, 2001). During their life course women are more likely to have transitioned in and out of different roles which will impact on their social and economic resources in later life e.g. marriage, caregiving to children or older relatives, being widowed etc. (Senie, 2013). As a result, women will have had less steady periods of employment and lower wages. In addition, women's roles as caregivers to elderly relatives is associated with long term disruption in social activities and declines in health (ibid.).

Inglehart (2002) examined the joint effects of age and gender on SWB using data from 65 diverse countries. His findings, which are highly significant as they are from the analysis of a pooled sample of 146,000 respondents[60], indicate that gender is related to SWB, but that the pattern changes throughout the lifespan. Younger women (those aged under 45 years of age) tend to be happier than men (28% of women describing themselves as very happy, compared to 24% of men). However, beyond the age of 45 years the relationship between gender and wellbeing reverses, with men reporting higher SWB. Furthermore, with increasing age the gap between men and women in reported subjective wellbeing continues to widen, so that in the oldest group 20% of women described themselves as very happy compared to 25% of men. It would also be interesting to know whether greater proportions of women describe

[60] The indicators of SWB are self- reported levels of happiness and satisfaction with one's life as a whole from the World Values Surveys, 1981-1997. The analysis is based on pooled data from 122 surveys in 65 societies on all six inhabited continents, containing 70,192 men and 76,079 women.

themselves as unhappy, compared to men. Although may not be experiencing higher levels of SWB, fewer women may experiencing unhappiness compared to men. The fewer numbers of men who are left in the oldest groups may also be unusual in different ways e.g. they may be experiencing better health and be wealthier.

Marcelli and Easterlin (2007) observed that at the start of their adult lives women were happier than man, with the gap narrowing towards middle age. Upon reaching around 47.5 years of age the relationship reverses and men are found to be happier than women. They also found that there was a similar pattern with satisfaction with family life and satisfaction with finances. Based on these findings they concluded that young women at the start of their adult life are more likely to have partners or be married compared to men- this results in increased levels in satisfaction with family and satisfaction with finances leading to higher levels of life satisfaction. In other words, their aspirations for material possessions and marriage and family are realised at this stage. In their fifties, men are likely to benefit from the positive effects of retirement, in terms of their finances and family life, while women are more likely to experience widowhood and greater financial insecurity.

Inglehart (2002) also refers to the aspiration-adjustment model but incorporates wider societal changes in explaining the pattern of SWB across the lifespan for women. He explains that, although the opportunities for women are still limited in comparison to men, recent improvements in gender inequality in many countries mean that women are now experiencing achievements which surpass aspiration levels, as their aspiration levels are still influenced by the situation in the recent past, resulting in higher subjective wellbeing. He also posits that, at the same time, the improvements in wellbeing experienced by women are offset, at least in part, by a 'systematic tendency to devalue older women'(Inglehart, 2002, p. 395). The likelihood of this is greatest in the more industrialised advanced countries in which women have made the most progress in recent decades; in such countries there is a greater propensity for media and advertising to emphasise youth (and also equate youth with beauty) thereby denigrating the social value of older women (Bluhm, 2000; Inglehart, 2002, p. 393). This contributes to the findings where older women report lower levels of subjective wellbeing.

4.4.4.2 AGING AND WELLBEING FOR WOMEN IN BANGLADESH

Due to large differences between men and women at the time of marriage, women are far more likely to be widowed at an early age. Since participation in employment for women in Bangladesh is limited, women will have by and large reliant on their husbands for support, throughout their lives. As a result, their personal assets and savings will be limited. Moreover, traditions around inheritance mean that on the death of their husband, any

property will immediately become the property of any sons. As a result, as they age, women are far more likely to be reliant on their children for support.

In terms of health outcomes elderly women in Bangladesh tend to be more acutely and chronically ill than other populations, and in more need of treatment, yet they have least access to healthcare services (Hamiduzzaman et al., 2016)

4.4.5 CONNECTEDNESS: WHO BENEFITS FROM MARRIAGE

The importance of connectedness to others or social relationships for wellbeing is well documented. A vast body of evidence exists indicating that social connections both at the individual level and the household level are a robust predictor of physical health, as well as life expectancy (Giles et al., 2005; Holt-Lunstad et al., 2010) and mental health (Taylor and Stanton, 2007). The happiness literature also states that interpersonal relationships are a significant factor in human wellbeing (Heil 2009; Lambek 2008; Layard 2006).

In this section I review the literature concerning the relationship between marital status, one of the most significant relationships in people's lives, and subjective wellbeing outcomes, and the way that this is influenced by gender.

Studies originating in varied disciplines, ranging from Psychology to Epidemiology have documented that married individuals enjoy a wide range of benefits compared to people who are single[61]. The persistence of such findings has even led some policy makers to suggest that marriage should be encouraged[62]. The *marital resource model* suggests that these differences in wellbeing outcomes arise as a result of the greater economic resources, social support, and regulation of health behaviors (e.g. avoidance of risky behaviours) that married individuals benefit from (Ross et al. 1990; Umberson 1992). As a result, married persons enjoy improved physical health (Proulx and Snyder-Rivas, 2013) and life expectancies (Robles and Kiecolt-Glaser, 2003) and better psychological health and happiness.

One of the strongest findings regarding characteristics that are correlated with measures of wellbeing such as happiness and life satisfaction is the impact of marital status (and indeed cohabitation). Findings from the analysis of cross-sectional data have consistently shown that respondents who are married tend to report higher levels of happiness and satisfaction

[61] Much of this research has compared married individuals with unmarried individuals without distinguishing between individuals that are in cohabiting partnerships or single. Furthermore, a substantial part of this research originates from the U.S. during a period when cohabitation was still relatively less common.

[62] For example, the UK conservative government led by David Cameron implemented legislature that extended tax breaks for married couples.

than their non-married peers (Lucas et al., 2003). In addition, the statistical relationship remains when other demographic characteristics are controlled for (Clark and Oswald, 1994). Respondents who have never married or are widowed report lower levels of satisfaction and happiness than those who are married, but higher than those of individuals who are separated or divorced. The relation between marital status and SWB was found to be statistically robust in probability samples (totalling 59,169 persons) from 42 diverse nations around the world, varying in levels of development (Diener et al., 2000). It would be expected that co-habiting couples who experience the same benefits as married couples, would have similar correlations with SWB as married couples. Within Western, individualistic cultures such as the U.K., where the prevalence and acceptance of cohabitation has increased, the SWB of co-habiting couples are rising to levels similar to those of married couples (Perelli-Harris and Styrc, 2016), and they also have a lower risk of psychological disorders and depression compared to unmarried, divorced and widowed persons (Musick and Bumpass, 2012).

However, there is evidence that cultural norms have an impact on the relationship between marital status and wellbeing. found that married couples were happier than non-married couples, especially in collectivist, traditional cultures such as India. On the other hand,

Explanations for the observed relationship between marital status and measures of subjective wellbeing have varied. As the majority of studies finding relations between marital status and subjective wellbeing are cross sectional the direction of causality has been debated. Earlier it was assumed that being married resulted in enhanced levels of subjective wellbeing i.e. marriage is endowed with a protective effect. Another possibility is that people who are happier to begin with are those who are more likely to get married, and stay married; in other words that there is a selective effect (Frey and Stutzer, 2002). On the other hand, unhappy individuals are less likely to enter marriage; for example, Mastekaasa (1994) found that individuals in poor health were less likely to get married in the four years following the survey. Lucas (2005) using a large longitudinal study presented evidence which supports both propositions for the relationship between marriage and subjective wellbeing (that marriage leads to happiness and happiness leads to marriage).

A shortcoming of this body of research is the underlying assumption that married means ‘happily married’. Those who are not happily married experience higher rates of physical and psychological health problems (DeLongis, Folkman, & Lazarus, 1988) which will result in lower levels of subjective well-being, however, this is rarely drawn out in survey analysis, presumably due to the stigma attached to being unhappily married. Perhaps for this reason,

Lucas, Clark, Georgellis, and Diener (2003) conducted a longitudinal study, set in Germany[63] and found no support for the notion that happiness increases after marriage.

4.4.5.1 WHO BENEFITS IN MARRIAGE: DIFFERENCES BETWEEN MEN AND WOMEN

There are several examples of how the gains and losses from entering marriage differ for men and women. Based on studies in developed countries women are thought to benefit more from the economies of scale that arise from co-habitation, pooling of wealth, and specialization of roles from marriage than men (Ross et al., 1990; Waite and Gallagher, 2002), although this is less true as levels of education and education increase for younger cohorts of women (Oppenheimer, 1997). At the same time, in spite of potential changes in expected gender roles over time, marriage still commonly entails greater responsibilities for women, which include household and parenting duties (Lennon and Rosenfield, 1994). In terms of physical health outcomes men have been found to benefit from just being married (Ross et al., 1990); for women, on the other hand, the health advantages increase with the duration of the marriage (Hemstrom 1996; Lillard and Waite 1995). Women are also more likely to provide emotional support to their partners within a marriage (Erickson, 2005); after experiencing a stressful event married men are able to share or pass on the emotional burden to their partners (Hobfoll et al., 1996; Hobfoll and Vaux, 1993).

The evidence for gender differences in terms of gains in subjective wellbeing for marriage are less clear. Early studies (e.g. Bernard 1972) suggested that marriage was beneficial for the mental health and wellbeing of men while being detrimental to women; Gove and Tudor (1973) also supported this empirically and offered the explanation that the roles of a married woman are less valued and more frustrating than that of a married man. Changes in gender and family roles since these earlier studies have altered the roles and status of women both within the home and beyond. Later studies (Veenhoven 1983) suggested that both genders gained from marriage in term of health (both physical and mental) and happiness, although for men the effect was slightly stronger. More recent studies conducted in developed countries such as Australia (de Vaus et al, 2002) and the US (e.g. Williams 2003) suggest that the gender discrepancy is no longer found, so that both genders benefit equally from marriage in terms of subjective wellbeing outcomes. In both instances this change is attributed to family roles in the spheres of marriage, parenthood and employment becoming more similar for men and women within these societies.

[63] The data in this study comes from Waves 1–15 of the German Socio-Economic Panel Study (GSOEP), a longitudinal survey of private households and individuals living in Germany.

Studies that have looked at the importance of the *quality* of marital relationships to subjective wellbeing have consistently found that the relation is stronger for women compared to men (e.g. Proulx et al., 2007; Proulx and Snyder-Rivas, 2013). Findings such as this suggest that the personal wellbeing of women is more closely linked to quality of their marital relationship than for men. However, it has been pointed out that the majority of studies examining marital quality and subjective wellbeing have been dominated by studies with younger populations. As a result findings of the strong relation between marital quality and subjective wellbeing may only apply to women who are younger.

It would be reasonable to expect that there would be changes in gendered roles and relations through the life course (and also through the course of a marriage itself). These changes will also mean that the salience of marriage to wellbeing and the construction of identity will vary through the life course in different ways for men and women. An indication that the salience of marriage to individual wellbeing may vary at different stages of the life course comes from a cross-sectional study conducted in a Polish sample of middle-aged men and women (aged 40-65 years) (Kaczmarek, 2004). The findings were consistent with previous studies in that those in relationships experienced higher levels of wellbeing and experienced a range of better life outcomes (Kaczmarek, 2004). In their analysis gender, marital status and education were the three main predictive factors of wellbeing explaining 29% of the variation in subjective wellbeing. However, while marital status was the most important predictive factor for men, for women education was the most important factor in explaining variations in subjective wellbeing.

4.4.6 EMPLOYMENT STATUS AND WELLBEING

Being unemployed is a distressing life experience for many people. Aside from the obvious financial consequences, individuals also experience significant adverse psychological and social consequences arising from unemployment. The benefits of being employed are considered to extend far beyond the earning of monetary income (Winkelmann and Winkelmann 1995), meaning that employment not only increases subjective well-being because the income can be used to buy goods, but also because being employed satisfies deeper needs within the individual. The psychological impacts of unemployment include a loss of meaning in life, loss of personal identity, and self-esteem arising from one's working role. Persons who are unemployed may also experience social stigma in a context where working for one's income is the norm. This explains why persons such as pensioners and housewives exhibit higher levels of subjective wellbeing than other unemployed persons as their unemployment is socially approved (Stam et al., 2016). In addition a loss of employment may also mean exclusion from social relationship and networks which arise from the work setting; these social networks which are a source of emotional support are related to improved mental and physical health (Waldron and Jacobs, 1988, 1989).

In an extensive body of cross-sectional studies, unemployment has been found to have a strong and highly significant negative effect on levels of subjective wellbeing and satisfaction (e.g. Frey and Stutzer 2002; Dolan et al. Di Tella et al. 2003; 2008) and higher levels of negative psychological outcomes such as distress and self-doubt (Stokes and Cochrane 1984; Theodossiou 1998). Using panel data (Lucas et al., 2004; Winkelmann and Winkelmann, 1998) the direction of causality has been established as mainly running from unemployment to subjective wellbeing; in other words there is not a selection process whereby those that are unhappier to begin with self-select to become unemployed. However, it's also possible that unhappy, and therefore poorly performing, workers are more likely to lose their jobs. The effect of unemployment on levels of satisfaction and SWB persists, even after the loss in income is controlled for, indicating that the loss of income arising from becoming unemployed is not the main issue in explaining the distress experienced by unemployed persons. In countries with high levels of social security expenditures aimed at providing a safety net from which the unemployed can benefit the difference in subjective wellbeing between the employed and the unemployed is not smaller than that in countries where the social security system is less generous (Ouweneel, 2002). Such findings suggest that the social and psychological benefits, associated with having a job, are actually more valued than the monetary aspect (Winkelman and Winkelman, 1998). The effects of an episode of unemployment also has lasting effects on people's levels of SWB, that is hedonic adaptation[64] to unemployment seems to be quite limited (Lucas et al., 2004; Lucas, 2007) Even when individuals do go on to find new employment, they do not recover completely in terms of decreases in life satisfaction (Clark, 2012, p. 11; Lucas et al., 2004).

4.4.6.1 BEING UNEMPLOYED IS WORSE FOR MEN

Several studies have concluded that the impact of unemployment on men is more severe than for women (Blanchflower and Oswald, 2004; Hultman et al., 2005). A recent study conducted by Meer (2014) study included samples from 26 European countries and considers the impact of unemployment on levels of subjective wellbeing and how this varies with gender as well as marital status. Meer (2014) found that married (or partnered) employed men have similar levels of subjective wellbeing to married employed women; and that being married *and un*employed has a much greater negative effect on men compared to women. Blanchflower and Oswald (2004) similarly found that married men with dependents experienced greater mental distress from becoming unemployed than married women who become unemployed (Blanchflower and Oswald, 2004). Meer (2014) also found that amongst those who are single levels of subjective wellbeing for employed men and women

[64] Decreasing in hedonic intensity over time (Frederick and Loewenstein, 1999.

are similar; but unemployed men have significantly lower levels of subjective wellbeing than unemployed single women. The negative effect of unemployment was greatest for single men; and then for married men. The negative effect of unemployment was smallest for women and there was not a significant difference in the impact of unemployment for single women and partnered women. Based on these findings Meer (2014) concludes that for men having a partner mediates the impact of unemployment; this is not the case for women.

An understanding of the social and psychological costs which arise from deviations from traditional roles as a result of unemployment offer explanations for these observed differences between genders. Considering the case of married or partnered persons it appears that marriage offers women protection against the negative effects of unemployment whilst it has the reverse effect on married men. In most societies the sanctioned role of men is that of the provider, the one who is financially responsible for their families. Experiences of unemployment, and possibly a greater involvement in household work, undermine men's sense of identity and self-worth.

The impact of unemployment on the subjective wellbeing of women is less clear. In comparison to men married women suffer less distress on experiencing unemployment and the presence of children in the home also appears to further ameliorate the impact of unemployment for women in contrast to men; while it results in lower SWB for men, it has the opposite effect for women resulting in higher SWB (ref.). Other studies have found that for women, particularly those with children, *employment* may actually lead to declines in subjective wellbeing (Mencarini and Sironi, 2010; Slotkin, 2007). Explanations for the decline in subjective wellbeing with participation in paid employment by women have cited role conflict being experienced by women, and also their being the recipient of criticism as they are perceived as neglecting their primary roles of homemakers and parent (Slotkin, 2007). Consistent with these explanations are findings that show that moving from full –time work to part-time work time results in higher SWB for women while decreasing SWB for men (Booth and van Ours, 2009; Mencarini and Sironi, 2010). Transitioning from full time to part time employment enables women to better fulfil their multiple roles and reduces role conflict. In both instances, whether being unemployed or working part-time, women are able to find fulfilment in their roles as homemakers and mothers, thereby not transgressing prevalent societal norms and expectations. For men unemployment and moving to part- time work, is more likely to be involuntary or related to declines in health and aging. It may also be concomitant with taking on greater responsibility within the home. For men this transition marks a transgression of socially sanctioned roles as the primary breadwinner, and presents as a greater challenge to their sense of identity resulting in decreased levels of subjective wellbeing.

A further reason that may explain the differential impact of employment in the construction of wellbeing is the formation of social identity and status. Whereas women derive their sense of identity and status in multiple spheres such as being a friend, a partner, a parent or an employee etc. men's sense of identity is primarily formed in their workplace which means that a loss in employment present greater challenges to men's sense of identity. Meer (2014) conducted further analysis and found that while for women the employment of their partner also confers status, thus contributing to their subjective wellbeing, this was not the case for men. In relation to the finding that single men experience greater negative impacts than women, Meer (2014) suggests that single women may not be subject to the same expectations to participate in paid work as their male counterparts.

4.4.6.2 WHAT DOES EMPLOYMENT AND INCOME GENERATION MEAN FOR THE WELLBEING OF WOMEN IN BANGLADESH

Within Bangladesh the efforts to maximize growth and political democracy have meant a concerted effort to improve the condition and participation of women. In spite of impressive gains in levels of education and fertility decline, The employment rates for women in Bangladesh lag behind other countries in the regions.

However, since the early 1990s there have been an expansion of employment opportunities for women in the export -oriented manufacturing industry, most significantly textiles and garments, which have directly opened up the labour market for poorer sections of the population, particularly young women migrants poorer women. The economic independence that these opportunities present to women and the visible contributions that that are able make to their families has resulted in a shift in the status of women (Kabeer, 1997). Urban women are more likely to manage money, accumulate personal assets and have greater freedom to move outside of their homes compared to their non-working counterparts (Salway et al., 2005), and are reported to enjoy improved access to education, health and nutrition as a result of the shift in gender norms. However, other researchers suggest that to consider these changes in women's lives as empowerment is shortsighted (e.g. Rozario, 2007). In reality, the employment sector for migrant women in urban areas is poorly paid, precarious and exploitative (ibid.). Studies also suggest that as women attempt to exercise greater agency, as their economic contributions increases they face oppositions from male counterparts (Kabeer et al., 2011) and may even be exposed to a greater risk of domestic violence (Naved et al., 2001; Naved and Persson, 2005). Furthermore, women will continue to be primarily responsible for housework and caring giving duties; their employment outside of the home, often means that younger children, particularly females, will be prevented from attending school or gaining employment in order to perform household tasks (Delap, 2001).

These findings parallel those in rural sites where NGOS's and microfinance institutions have sought to redress the traditional imbalances by providing access to finance and income generation activities specifically for women, as well as access to health services and legal aid. Several studies caution that the proponents of micro-credit by focusing on economic advancement fail to consider the impact on participants from a gender perspective, and that such programmes in the context of traditional and dominant patriarchal values are in fact ineffective (Goetz and Gupta, 1996; Kabeer, 2001; Nahid Aslanbeigui, 2010). Isserles (2003) found that women aprticapnts of micro-credit programmes continued to be dominated by their husbands, so that they exercised little control over how the loans were utilized and did not benefit form any economic gains. More worryingly, 57% of women reported an increase in verbal aggression after obtaining a loan, and 16% reported verbal and physical abuse (ibid.). Women's involvement in micro-credit groups was also detrimental to their relationships within the wider community, as a result of their being seen to be transgressing traditional gender norms (De Hoop et al., 2014; Montgomery, 1996).

4.4.7 CONCLUSION

In this section I reviewed the body of research that has sought to identify demographic and socioeconomic variables that are correlated with subjective and psychological wellbeing with a view to gaining an understanding of the broad areas of life that constitute a person's wellbeing. My primary aim was to gain an understanding of how, and why, men and women differ in their experience of wellbeing. Accordingly, my overall approach was to review the evidence for whether and how gender moderated the relationship between the correlating variable and subjective wellbeing outcome. I also review the explanations that have been put forward to explain the gender differences. Understanding how the experience of subjective wellbeing varies with the characteristics of individuals in terms of their gender, stage in the lifespan and the context in which they reside (i.e. the prevailing culture and stage of economic development) also offers insights into how goals and motivations vary. The differing impact of marital status, age and employment on subjective wellbeing is explained by the difference in ideas about roles and expectations. These in turn are shaped by prevailing cultural values and the economic situation in the context in which they reside.

In this chapter I show that men and women, at different stages in their life, differ in how factors such as age, marital status and employment status[65] affect their experience of wellbeing. One possible explanation for this is that they also differ in their goals and motivations during different stages of their lives. This supports the development of a gender

[65]The choice of factors that are being reviewed emerged was guided by what emerged during my literature review.

specific, individualised goal attainment measure of perceived quality of life for use in Bangladesh. Furthermore, the fact that variation in how these factors impact upon subjective wellbeing depends upon the prevailing values and beliefs within a particular context (for example, economic expectations of married men) would suggest that context specific measures of subjective wellbeing or quality of life are more appropriate than universal ones.

There are numerous additional individual level variables which have been studied in relation to SWB, key findings from a selected number of variables, are summarised in Table 4.

Table 4 Selected individual level variables and SWB

Genetics and heredity	Evidence suggest that some part of a person's happiness may be attributed to genetics, although there is debate as to how large the effect is. Identical twins reared apart are more similar in SWB levels than fraternal twins raised together- suggesting that there is a genetic predisposition that influences positive and negative affect (Lykken and Tellegen, 1996; Lyubomirsky et al., 2005b). Historic natural selection has been cited as an explanation for the predominance of happy individuals, happy individuals are more likely to form relationships and raise children. Individual differences in happiness may therefore reflect inherent differences in temperament and as a consequence be resistant to change (Diener and Lucas, 1999). From an evolutionary perspective , a predominance of positive emotions would facilitate 'approach behaviours' which lead to broadening and building of resources (Fredrickson, 2001) Issues of heredity and closely linked to personality and psychological factors. Evidence from longitudinal studies suggest that the extent to genetic disposition influences SWB levels is limited; the impact of intervening life events e.g. marriage, unemployment and bereavement suggest that cultural and situational factors are also important factors.
Personality	Personality is described as characteristic response tendencies , which are considered to have both genetic and environmental components (Diener and Lucas, 1999). The traits of extraversion and neuroticism are the most important explanation of the link between personality and SWB, and influence the experience of positive affect and negative affect respectively. These two traits thus influence the way in which people respond to questions regarding subjective wellbeing ((Robinson et al., 2003) and coping styles (McCrae and Costa, 1986) These two personality are able to predict SWB over longer time periods, but again the extent to which they can influence levels of SWB in the face of intervening events is debated.
Educational attainment	Generally, each additional level of education results in higher levels of SWB (Blanchflower & Oswald, 2004), although Stutzer (2004) concluded that middle level education is related to the highest life satisfaction. There is also evidence to suggest that education has a stronger positive effect in less developed countries (e.g. Ferrer-i-Carbonell, 2005).
Religion: belief and practice	Religiousness, in terms of belief in a God affects SWB, with religious people generally being happier than non-religious people (Diener et al., 1999; Helliwell, 2002; Lun and Bond, 2013). Holding stronger religious beliefs also appears to protect people against some negative events (such as unemployment and loss of income); however certain negative such as divorce may be more difficult to cope with in relation to religious beliefs (these are findings from UK data; Clark and Lelkes, 2005). Regular involvement in religious activities is also positively related to SWB regular engagement in religious activities is positively related to SWB (e.g. Clark & Lelkes, 2005; Helliowell, 2003, Hayo, 2004)).Using a panel dataset, Putnam and Lim (2010) demonstrate stronger evidence for the causal effects of religiosity on life satisfaction , and demonstrate that social networks formed in congregations, a sense of strong religious identity, and purpose in life are key factors that mediate the linkages between religion and life satisfaction.
Health status	The relationship between health and SWB appears to be bi-directional. The existing evidence suggest that SWB contributes to better health outcomes and increased longevity (Diener and Chan, 2011; Lyubomirsky et al., 2005a). In longitudinal studies that have examined specific groups , individuals with higher SWB have been found to live longer (Danner et al., 2001; Pressman and Cohen, 2005). Similar evidence has been found in larger and more representative samples (Diener & Chan, 2011). One explanation that has been put forward to explain such findings is that people having higher levels of SWB are more likely to engage in healthy behaviours e.g. exercising, not smoking etc (Diener et al., 2015). Other studies have found link between high levels of SWB and improved immune systems, and improved cardiac health (Diener and Biswas-Diener, 2008)
Social relationships	Social interactions with friends and families are an important source of happiness (Helliwell, 2006; Helliwell and Putnam, 2004)

Considering the summary in Table 4 the determinants can be categorized as those that are personal characteristics i.e. personality and genetics generally beyond the purview of policy., are ; and characteristics that are developed i.e. health status, education and religion. It is

apparent that many of the determinant variables are inter-related; for instance, education is likely to be related to higher incomes and better health. Controlling for these other factors would reduce the effect of education. The findings also raise questions regarding policy interventions to enhance SWB. While promoting education and health are accepted concerns, the findings here also suggest that encouraging religion, and enabling social interactions should also be considered.

4.5 THE CONTEXT (OR POPULATION LEVEL VARIABLES) AND SUBJECTIVE WELLBEING

In the preceding sections I discussed the relationship between variables at the individual level and subjective wellbeing (with the exception of income which was considered at both individual and population levels). In this section I review some of the population level variables which have been found to have an impact on subjective wellbeing, independent of individual-level variables; Table 5 provides a summary of some of the key population variables and the relationship with SWB.

Table 5 Selected population level variables and SWB

Population health	The relationship between population health and subjective wellbeing is bidirectional. (i) Subjective wellbeing influences health and longevity in populations. After controlling for initial health in a generally healthy population subjective wellbeing is predictive of mortality. Subjective wellbeing is also predictive of mortality across a number of health conditions, including depression, anxiety, coronary heart disease and cancer (Diener and Chan, 2011) (ii) Average life expectancy has been found to be the strongest predictor of life satisfaction at the national level , ahead of GDP (Abdallah, Thompson and Marks, 2008)
Income inequality	The empirical findings regarding the overall level of inequality within a society and SWB are extremely mixed e.g. with little consensus on whether the relationship between income inequality and SWB is positive or negative (Schneider (2016) provides an extensive review). For instance overall inequality is negatively related to happiness in Europe but to a lesser degree in the U.S. (Alesina et al., 2004). To explain these differences, they propose two moderating variables 1) (denied) preference for income inequality; and 2) perceptions of social mobility. They suggest that Europeans tend to be averse to inequality, and associate reduced inequalities with increased societal trust and fairness. In the U.S. on the other hand there is a greater tolerance for societal inequalities; income inequalities are perceived by people as signalling future mobility resulting in an increase in current satisfaction levels.
Unemployment rates	Some studies have found that higher rates of unemployment impact negatively on SWB levels, even effecting those who are employed (as they fear becoming unemployed themselves ((Meer, 2014). There is also evidence that the more unemployment becomes the norm, the less individuals are affected by it[66]. In a study using data for 94 countries, the effect of unemployment on subjective wellbeing appeared to be greater in both richer countries and countries which had higher employment rates (Stanca, 2010). A previous study conducted by Clark (2003), using panel data of 10,000 British individuals in 5,500 households reported that the well-being levels of the unemployed increase as the unemployment rates in a reference group increases; the reference group can consist of others in the region, other household members or even partners. Such findings would suggest that as unemployment becomes more widespread and the norm, the social stigma associated with experiencing unemployment are reduced (e.g. Lindbeck et al. 1999).
Political freedom and participation	Other contextual factors include the issues of political freedom and participation which have been found to influence SWB in better off nations (Diener 1995). International data show that there is a positive relationship between democratic institutions and life satisfaction, after controlling for the effects of economic wellbeing, cultural predispositions, and individual characteristics (Frey and Stutzer, 2000; Helliwell and Huang, 2006; Owen et al., 2008). The degree to which individuals in a nation participate in referenda is also positively related to life satisfaction ((Frey and Stutzer, 2000). Frey and Al-Roumi (1999) suggest that 'political democracy acts to centre the public agenda on state actions that enhance life quality'. However, countries such as the U.S. and U.K which are Western political democracies exhibit reasonably high levels of happiness, while levels of participation in the democratic process are relatively low, and decreasing (Rapley, 2003, p. 17).
Social welfare spending	Related to the previous points concerning inequality and political freedom: higher levels of public spending on medical care, unemployment benefits etc. (Di Tella et al., 2003; Pacek and Radcliff, 2008), andblic safety (fire, police and other emergency services) (Wassmer et al., 2009), are generally associated with higher wellbeing at the population level.This may explain why in developed countries, life satisfaction levels are higher when the government is headed by left-wing , more egalitarian parties (Alesina et al., 2004; Pacek and Radcliff, 2008).

[66] This again relates to the impact of 'social comparisons' on SWB.

4.6 THE IMPACT OF CULTURE, AS SHARED NORMS, VALUES AND BEHAVIOURS

Culture has been operationalized in terms of the degree to which individuals within nations are integrated into groups (Hofstede, 2001). In individualist societies (e.g. U.S. and countries of Western and Northern Europe) people's concerns are generally confined to themselves and their immediate families. In contrast, collectivist societies (e.g. China, Korea and Japan) are characterized by strong cohesive groups such as extended families, and reciprocal social support (Triandis, 2001); there is a greater emphasis on family and work group goals rather than individual needs and desires.

High levels of individualism have been associated with higher levels of SWB, but when GNP per capita is controlled for, the correlation between individualism and SWB, is reduced (Diener et al., 1995). Culture determines experiencing 'happiness' and whether it is valued; when asked how often they thought about their own happiness, almost 10% of Chinese college students reported 'never', in contrast to American students who reported thinking about happiness 'several times a week' (Diener et al., 1995). Similarly, Brazilians think it is more desirable to experience positive emotions compared to Chinese respondents (6.2 vs 4.5 on a 7-point scale) (Suh and Oishi, 2002). For collectivists, groups or social judgements were found to be more important than emotions experienced in predicting life satisfaction (Suh et al., 1998). These findings point to the fact that the SWB construct, particularly the affective component, reflects a Western individualistic perspective of personhood and wellbeing (Christopher, 1999; Lu and Gilmour, 2004).

Cultural psychologists contend that culture cannot merely be considered as a cause of SWB (as in the individualistic/ collectivist dichotomy). Culture as well as defining what it means to 'be happy' or to 'experience wellbeing''(Kitayama et al., 2000, p. 114), also determines how it is to be pursued (Lu and Gilmour, 2004). It follows that individuals living in different cultures will be using different criteria when evaluating their own lives, and the broader society. People's experience of happiness will depend upon whether they feel that they are doing the 'right thing' as defined by the prevailing beliefs, and the social context and its customs[67]. Individuals exercise agency in terms of the extent to which they subscribe to the prevailing cultural norms: "individual differences in culture can be observed among people in the degree to which they adopt and engage in the attitudes, values, beliefs, and behaviors that, by consensus constitute their culture" (Matsumoto, 1996, p. 18).

[67] Various methods have been used to deal with these distortions, when studying SWB in different contexts; for instance the development of social desirability scales, and measures of SWB which incorporate aspects such whether respondents believe that they are leading lives which are 'good', whether they enjoy their lives and whether others believe them to be living well.

This stance converges with WeD's position that there is a greater need for understanding the cultural construction of wellbeing and supports the development of culturally specific and individualized measures of subjective wellbeing, such as the BGA**.**

4.7 PSYCHOLOGICAL PROCESSES : DO THEY UNDERMINE THE VALUE OF SUBJECTIVE MEASURES?

In previous sections of this chapter certain psychological processes have been cited as explanation for the disjuncture observed between objective and subjective wellbeing measures.

4.7.1 THE EFFECTS OF PSYCHOLOGICAL PROCESSES

In section 4.3.3 in discussing the empirical findings relating to the complex relationship between income and subjective wellbeing I cited explanations relating to adaptation, comparison processes and adjustment of aspirations (standards) to explain findings where increasing average income had not resulted in increases in happiness. This group of effects, which have been labelled 'scale effects' (Taylor, 2014, p. 250), result in a shift in people's reports of SWB, so that they are higher or lower than we would expect them to be.

Studies suggest that although people have intense emotional reactions to major and permanent changes in the circumstances of their lives, these reactions appear to subside more or less completely, and often quite quickly (Headey and Wearing, 1992; Frederick and Loewenstein, 1999) [68]. In a much cited study, Brickman, Coates, and Janoff-Bulman (1978) compared people who have spinal injuries, and lottery winners with a control group, and found that the lottery winners were not significantly happier than the control group, and that the people with spinal injury were less happy than the other groups, but not to the extent expected. The term *hedonic treadmill*[69] (Brickman and Campbell, 1971) was used to describe such observations. In subsequent studies with groups that have experienced other major life events the findings indicate that adaptation does occur, at least to some extent, in all these cases, e.g. in the case of marriage adaptation is to a large extent complete (Lucas and Clark, 2006). However the adaptation to negative events such as divorce (Lucas, 2005), bereavement (Coifman et al., 2007), and unemployment (Lucas et al., 2004) tends to be slower and incomplete.

[68] Cummins 'homeostasis theory of SWB is a further attempt to explain the predominantly positive and stable life evaluations which are displayed by the majority of people. According to Cummins and Nistico (2002) an evolutionary mechanism serves to maintain an individual's life satisfaction within a narrow positive range , in part by a conscious buffering system of positive cognitive biases which include self esteem, perceived control and optimism.

[69] "The nature of [adaptation] condemns men to live on a hedonic treadmill, to seek new levels of stimulation merely to maintain old levels of subjective pleasure, to never achieve any kind of permanent happiness or satisfaction" (Brickman & Campbell 1971, p.289)

Rising aspirations will also have a similar effect. In my thesis I argue that responses to survey questions about life satisfaction and happiness as cognitive evaluations are a measure of how well expectations match expectations. Rising aspirations as a result of improved life circumstances (such as in the case of increased income), mean that the impact on happiness or life satisfaction scores will be offset, so that they remain the same (see section 4.3.3 for a discussion of this relating to the explanation of an aspect of the Easterlin Paradox).

Similarly, people also make comparisons with other people in evaluating their lives (social comparisons). This means that even though circumstances in a particular society have improved, as people make comparisons with others whose situation will also have improved, their own levels of SWB will not show an increase.

There is evidence that factors such as personality will influence these psychological processes. For instance, the selection of reference groups for social comparisons may be dictated by proximity – your neighbours or your family (Diener and Fujita, 1997), or may be consciously selected depending on the person's personality. Optimists may avoid comparisons with similar others and will prefer to make comparisons with dissimilar or less fortunate others[70] in order to enhance their self-esteem or restore SWB (Brickman et al., 1978; Dubé et al., 1998). Depressives on the other hand will focus on people who are performing better than themselves (Lyubomirsky & Ross, 1997). Additionally, the tendency to use downward or upward comparison may be a result of and not a cause of increased SWB (Diener and Fujita, 1995).

4.8 CONCLUSION

The potential for people to adapt to changes in their circumstances is of importance when considering the usefulness of subjective wellbeing measures to public policy. The effects of these psychological processes are especially problematic when researching happiness and subjective quality of life in developing countries. Empirical findings where people living in significant material deprivation report themselves as being happier or more satisfied than we would expect have been cited as arguments against the use of subjective measures of wellbeing and support for the use of objective indicators such as educational attainment and health. Development of theoretical approaches such as that of the capabilities approach (discussed in Chapter 2), and objective indicators of multidimensional wellbeing are, in part, attributed to these concerns.

[70] The use of 'downward comparisons' is referred to as the 'coping approach' in the health psychology literature (Buunk and Gibbons, 1997), or alternatively the 'self enhancement' approach (Suls & Wheeler, 2000)

In the light of adaptation effects, there are several ways in which policy decisions based on subjective measures could have an overall detrimental impact in terms of objective conditions (the following draws extensively from Stewart, 2014, pp. 12–13):

- Policies which lead to a deterioration in the objective conditions for some may result in increases in levels of SWB for others. For example, it may not be necessary to make poor people richer to improve their SWB levels as long as the people in their reference group become poorer.
- Policies leading to improvements in objective conditions may reduce SWB levels, e.g. overall economic growth raising expectations faster than incomes or increasing inequality and so reducing relative income, even as absolute income increases.
- Policies could be introduced that encourage adaptation to bad conditions, resulting in increases in SWB, rather than addressing the conditions themselves. Stewart (2014) gives an example of the UN responding to increasing mental health problems amongst India's poor with programmes to improve mental health rather than addressing poverty itself.
- Serious issues could be neglected e.g. environmental degradation to maximize the present generation's levels of SWB, at the expense of future generations.

Considering the potential problems of SWB measures Stewart (2014) contends that they cannot replace objective approaches. However if a nation or individual group or an individual appeared to be improving in objective indicators of wellbeing, while SWB deteriorated, it would be difficult to conclude that the country was progressing. In other words, you cannot tell people that their lives are improving if they do not feel that this is the case. To address this it makes sense to consider both objective and subjective indicators following the conclusions of the Sarkozy Commission: 'Measures of both objective and subjective well-being provide key information about people's quality of life' (Stiglitz et al., 2009, p. 18)

5 METHODOLOGY: DEVELOPMENT AND VALIDATION OF THE BANGLADESH GOAL ATTAINMENT SCALE

In this chapter I present the methodology relating to the thesis aims, which are:

> *To develop and conduct preliminary validation of a socially and culturally relevant individualised measure of subjective QoL, the Bangladesh Goal Attainment (BGA) scale, applicable to women aged between 20 and 45 years of age residing in Bangladesh.*

Subjective quality of life or QoL is defined by WeD (see Chapter 1) as 'the outcome of the gap between people's goals and perceived resources, in the context of their culture, values, and experiences of un/happiness'. The pilot BGA instrument consists of an expansive list of goals[71] which represent the facets or aspects of life which are important to women's quality of life in Bangladesh. Respondents are required to rate this list of goals in terms of satisfaction and importance. The measurement of perceived QoL may be in terms of satisfaction ratings, or necessity weighted satisfaction ratings, enabling the calculation of the gap referred to in the WeD definition of QoL

In the following section I start by providing an overview of the steps followed in developing the BGA instrument and the subsequent analysis of data. I then introduce the terminology relating to the various aspects of validity relating to measurement instruments, and discuss how these are being evaluated in relation to the BGA instrument during its development and data analysis. In the later sections of the chapter I give a detailed account of the actual development and field testing of the BGA instrument.

5.1 OVERVIEW OF DEVELOPMENT OF THE BGA INSTRUMENT AND THE DATA ANALYSIS FOR VALIDATION

There are a series of steps that should be followed when developing and validating a measurement instrument such as the BGA. The schema shown in Table 6, which is adapted from Hinkin (1997, p. 2), provides a useful summary of the steps followed in developing the BGA and the subsequent data analysis. It is important to understand that the validation of any measurement instrument is an ongoing process.

[71] The goal items included in the pilot BGA instrument are reported in Table 12.

Table 6 Summary of steps in the development of the BGA, and data analysis, for validation

STEP 1: ITEM GENERATION & RESPONSE SCALE DEVELOPMENT
This focus of this stage is to define the content of the BGA scale and ensure that all important variables are considered for inclusion in the scale. The aim is to include all goals or aspects of life which are relevant to Bangladeshi women (aged 20 to 45 years) in assessing their perceived quality of life. The goal items are defined and written in clear comprehensible language for inclusion in the questionnaire. The two response scales, for necessity and satisfaction are also developed during this stage. This entails specifying the design of response scales in terms of the number and wording of response anchors. (The content and face validity of the BGA instrument are the focus of Step 1 and 2).
STEP 2: CONTENT AND FACE VALIDITY ASSESSMENT
The focus of this stage is to review the pilot BGA and eliminate inappropriate items; and, if possible, to reduce the number of items to a total that is more feasible to administer to respondents, while ensuring that the scales adequately measure the construct of interest, i.e. perceived quality of life in terms of goal attainment and goal importance. The scales are tested to ensure that the terms used (in the wording of goal items and in the response scales) are understandable by the target population. This is achieved through reviews by experts and respondents who are representative of the target population.
STEP 3: FIELD TESTING
Large scale application of the pilot BGA to a heterogeneous group of respondents (with other established measures). The data generated consists of the satisfaction ratings, necessity ratings and the computed necessity weighted satisfaction scores.
STEP 4: MEASURE PURIFICATION AND EXPLORATION OF UNDERLYING THEORETICAL STRUCTURE
Exploratory factor analysis of the scale data (goal satisfaction and computed necessity weighted goal satisfaction) is used to reduce items to a smaller number of summary variables or factors. These factors represent the underlying structure of the data; and enable us to determine whether e.g. goal satisfaction is better understood as a single, general, factor or as consisting of multiple independent dimensions (i.e. subscales). (The details of the procedures followed for factor analysis will be discussed in Chapter 7).
STEP 5: INTERNAL CONSISTENCY ASSESSMENT
The internal consistency reliabilities for each of the subscales produced in Step 4 are assessed using Cronbach's alpha (Price and Mueller, 1986). Cronbach's alpha is a measure of how well the items measure the same construct. Reliability testing is critical for new scale development before attempting to draw inferences based on the subscale scores.
STEP 6. CONSTRUCT VALIDATION
At this point, the subscales should demonstrate content validity (see Step 2) and internal consistency reliability (see Step 5), both of which provide supportive evidence of construct validity. Further evidence for construct validation is sought by examining the extent to which the subscale scores (mean scores of contributing items) correlate with other measures designed to assess similar constructs[72] (convergent validity), and whether the scores can be used to discriminate among different groups in terms of various socio-demographic and economic variables (known-group validity). The results of this analysis will be presented in Chapter 7.

In this chapter, I focus on steps 1-3 of Table 1. Steps 4 – 6, which relate to the deeper analysis of the BGA data, are reported in Chapter 7. Although the stages are described as steps it needs to be understood that there is some overlap between Steps 1 and 2 because of various iterative procedures. In Table 6 I also indicate the aspects of validity which are addressed at the various steps.

It is important to understand the various aspects of validity in order to understand the underlying rationale for the procedures followed in development of the scale and the data

[72] For quality of life measures such as the BGA instrument establishing convergent validity is a challenging in terms of identifying other QOL measures for comparison.

analysis. The relevant aspects of validity - content, face, and construct (convergent and known group) - will be defined with reference to Streiner and Norman (2008).

The initial focus of any validation study is on *content validity*, which refers to the extent to which a measure is representative of all the facets of the particular construct, thus allowing inferences regarding the construct to be made. This makes it the minimum psychometric requirement for measurement adequacy and the first step in construct validation (defined below) of a new measure (Schriesheim et al., 1993). *Face validity* is closely related to content validity and deals with whether the scale items appear to be measuring what the scale intends to measure (Streiner and Norman, 2008). In other words, bearing in mind the aims of the study: does the test appear to be appropriate and relevant to the persons to whom it is administered, and the potential users of the instrument? Achieving face validity of the BGA instrument is desirable[73] because the respondents should understand the aims of the instrument and perceive the questions as relevant in relation to assessing perceived quality of life in terms of goal attainment. Achieving face and content validity are the primary objectives during the development of the BGA instrument (see Steps 1 and 2 of Table 1), making these the most important stage in the development of a valid scale (Hinkin, 1995). The evaluation of content and face validity of the BGA goal item pool and response scales relies upon the subjective judgements of the test developer, augmented by that of experts and respondents who are representative of the target population.[74]

The assessment of *construct validity*, i.e. whether an instrument measures what it purports to measure, is reliant upon statistical procedures. Using the data generated from the large-scale application of the pilot BGA to a heterogeneous group of respondents (Step 3), the first step will be to conduct factor analysis. Factor analysis uses the pattern of intercorrelations among variables to derive groups of variables (i.e. goal items) that appear to measure common themes[75], each factor being distinct from the others. In the case of responses to the satisfaction questions, these groupings or subscales are taken to represent the dimensions of perceived QoL. The objectives of conducting factor analysis and the details of the decisions taken during the analysis will be discussed in more detail in Chapter 3.

Further analysis (also reported in Chapter 7) will be conducted using the subscale scores (mean scores of contributing items) to evaluate construct validity. For instance, are scores

[73]There may be instances where face validity may not be desirable because this may lead to respondents falsifying their responses, e.g. in the case of an instrument to assess alcohol abuse.

[74]The initial stage of data analysis (presented in Chapter 6) where the frequency of responses to the necessity and satisfaction scales of the BGA are examined also serve to provide evidence for face and content validity.

[75] This is also taken as an indicator of content validity.

obtained using the BGA instrument related to scores from another instrument measuring a theoretically related construct. Furthermore, can the subscale scores be used to discriminate among different groups of respondents defined in terms of various socio-demographic and economic variables (*known-group validity*). This is discussed in more detail in Chapter 7.

The remainder of this chapter consists of a detailed account of the development and field testing of the BGA instrument (Steps 1-3 in Table 6). It is important to understand that the validation of any measurement instrument is an ongoing process; cumulative evidence derived from multiple administrations contributes to better understanding of the scale's relationship to the construct that it seeks to measure.

5.2 STEP 1 & 2: DEVELOPMENT OF THE BGA INSTRUMENT

In this section I present an account of the development of the BGA instrument, that is the generation of the item pool and design of the response scales and the review process (Steps 1 & 2 in Table 6).

5.2.1 GENERATING THE GOAL ITEM POOL

This focus of this stage was to define the content of the BGA scale and ensure that all important variables are considered for inclusion in the scale by first generating a comprehensive list of items for inclusion in a goal attainment measure relevant to the quality of life women aged between 20 and 45 years residing in both urban and rural settings within Bangladesh. The two response scales for necessity and satisfaction were also developed during this stage. This entailed specifying the design of response scales in terms of the number and wording of response anchors.

There are two approaches to the item generation process. A deductive approach is described as a 'classification' from above, where items are developed or selected based on established theory (Hinkin et al., 1997). In the inductive approach or 'classification from below' the emphasis is on empirical reality and constructs are defined based on what respondents say or do (Hinkin, 1995; Hunt et al., 1991). I used a combination of deductive and inductive approaches to enhance the content validity of the final measure. As this is an emic scale it was important to capture the perspective of the target respondents. As the BGA measure is meant to measure an individual's perceived QoL, the content should be wide-ranging across several areas of life. Although survey methodologists recommend reviews of literature and expert opinion (Fink, 1995a, 1995b; Vaus, 2002), preliminary data collection using methods such as observation, interviews and focus groups with members of the target population should also be employed to ensure that all aspects of a poorly understood construct are

included, and that items are appropriately worded and are all relevant (de Vaus 1986; Sheatsley,1983).

The most significant source of data for the measure was a qualitative study, which I had led, conducted in Bangladesh as part of the Wellbeing in Developing Countries (WeD) Project. The study objectives were to elicit goals and sources of wellbeing by asking questions such as 'what are the characteristics of a household that is living well?' 'What are the characteristics of a person living well?' and 'what are your hopes?', as well as experiential sources of happiness by asking 'when were you happiest?'. Data was available from sixteen interviews and four focus group discussions conducted with women in both rural and urban sites in Bangladesh. I conducted analysis of the available data; the reports of the interviews and focus groups with women (Choudhury, 2005) were carefully reread for the purposes of item generation. I also reviewed data from another study, conducted by myself, exploring the goals and aspirations of women residing in rural and urban settings in Bangladesh (Choudhury, 2006). The methodology consisted of asking respondents to first name five goals that they were trying to achieve. In successive questions the respondents were asked to explain why these goals were important to them in order to identify the underlying motivations and values.

The data analysis was augmented by a review of pertinent literature, which included qualitative and participatory studies of women's lives in these settings and studies reporting the development of measures, as well as applications of existing measures.

From the review of literature and analysis of data, initially over 150 goal items were generated. These were further reviewed and organized into conceptually related groups (i.e. domains) and obvious duplicates were eliminated resulting in 129 items (Appendix A).

Although the BGA is an emic scale with domains and items being generated primarily from the respondents themselves, I compared and triangulated these with the item content of other accounts of wellbeing. Specifically, I drew on the insights from Nussbaum's (2001) list of central human capabilities; Doyal and Gough's (1991) Theory of Human Need, and Ryff and Singer's (2006) measure of psychological wellbeing.

I again reviewed the completeness of the item pool, aided by a close re-reading of interview reports and focus groups from the qualitative studies mentioned above, and additional relevant literature. I decided to take my initial pool back to Bangladesh and to further validate it via discussion and exchanges with experienced researchers in the field. This was a useful exercise because it helped ensure the relevance of the pool to the context of Bangladesh. It also helped further refine the item pool by double checking for double barreled items and duplicating items. In the end, I was left with a pool item of 90 items.

The descriptions of each item included the intended inferential and connotative meaning (i.e. associations implied by a term in addition to its literal meaning) (Bowden et al., 2002). Items were further combined or rephrased; some were also deleted as a result of these lengthy discussions. The descriptions and intended inferential and connotative meanings support the content validity of the scale by clarifying the intention of asking questions about these items.

The document with the descriptions proved to be very important. During the training of the interviewers I referred to it extensively and could provide the interviewers with a copy for review. This meant that variations in interpretation of the meaning of the original items by them during the fieldwork was kept to a minimum. This was particularly important in Sylhet where the residents speak a distinctive dialect of Bangla[76]. Interviewers, if required, were therefore able to explain or rephrase an item appropriately so that its meaning was unchanged, to aid respondents' understanding. The descriptions of goal items were also invaluable to me during the subsequent analysis and writing up.

Although I am proficient in conversational Bangla, I am aware that my knowledge of the language and idiom may not be sufficient to convey fully the correct sense of each item. I provided a researcher with the list of goals items, along with the inferential and connotative meaning, and asked them to translate the goal items into Bangla. The emphasis was on ensuring that the language used should be easily understood by women from different socioeconomic and regional backgrounds. Although there are significant regional variations in spoken Bangla, common standard Bangla is widely understood. As a result, it was not necessary to adapt the questionnaire for administration for either the Sylhet site or the Dhaka site, where respondents originated from districts throughout Bangladesh.

A distinction has been made between 'capacity' and 'performance' when wording items in HRQoL measures (Hudak et al., 1996). Capacity wording ('can do,' 'could do') has been found to allow for greater ease in scoring than performance ('did do', 'do do'), since individuals are able to provide a hypothetical response for those activities which were not actually completed in the time frame specified (Hudak, Amadio et al. 1996).

[76] Sylheti is distinctive enough to be regarded as a separate language (Rasinger, 2007).

Table 7 Example of wordings of a goal satisfaction question in terms of 'capacity' and 'performance'.

'Capacity wording' 'can do', 'could do'.	How satisfied are you with the assistance that *you will receive* from community members during times of need? [সাহায্য পাবেন -sahajjo paben]
'Performance' wording 'did do', 'do do'	How satisfied are you with the assistance that *you receive(d)* from community members during times of need? [সাহায্য পেয়েছেন-sahajjo peyechen]

In Table 7 I illustrate the distinction between 'capacity' and 'performance' wording using the goal item 'assistance received from community members during times of need'. This is an example of a goal item that respondents may not have experienced the need for. Wording the question in 'performance terms' risks excluding those who have not experienced the need for assistance. Wording the item in in capacity terms enables all respondents to answer this question based on a hypothetical scenario of requiring need.

5.2.2 DEVELOPMENT OF THE RESPONSE SCALES

Existing quality of life measures use many different methodologies for measurement including Likert style scales (five or seven-point bipolar scales which require the respondent to express how much they agree or disagree with a statement), visual analogue scales[77], and graded graphic scales (or sub-divided visual analogue scales). The most common is the Likert style scale, which is treated as yielding interval data by the majority of researchers (Blaikie, 2003)[78]. Cummins (2007) lists around 400 instruments that have been devised to measure subjective QOL or related constructs, and almost all rely on the use of 'Likert-type' scales. Most rating scales, including Likert-type scales and other attitude and opinion measures, contain either five or seven response categories (Meisenberg and Williams, 2008)[79].

While Likert-type scales are common in the social sciences, low literacy populations (such as in Bangladesh), unfamiliar with questionnaire surveys and research terminology, may have a poor understanding of the graded response format (see. Bernal et al., 1997; D'Alonzo, 2011). They may also be subject to acquiescent response bias, e.g. a greater propensity to agree with items, which is particularly prevalent among South Asian

[77] Visual analogue scales (VAS) are a psychometric response scale consisting of a straight line between two end-points. Respondents specify their level of agreement to a statement by indicating a position along the line.

[78] Likert scales fall within the ordinal level of measurement, i.e. the response categories have a rank order, but intervals between values cannot be presumed equal.

[79] Measures with at least five points are generally favoured to successfully conduct factor analysis. Data from 5-points scales creates variance that is necessary for examining the relationships among items and scales and to create adequate coefficient alpha (internal consistency) reliability estimates (Lissitz and Green, 1975).

populations, and populations of low literacy (Meisenberg and Williams, 2008). Researchers attempting to counter these issues have limited the number of Likert anchors. For instance, the Bangladesh WeDQoL instrument had response scales with a three-point scale for importance and a four- point scale for satisfaction. In the first section of the WeDQoL-Goals-Bangladesh questionnaire, respondents were asked: 'What things does one need to be happy in life?' followed by 49 'goals' for wellbeing. Respondents assessed the goals using a three-point scale (not necessary= 1; necessary = 2; and very necessary = 3). Following this, respondents were asked to rate their satisfaction with the same 49 goals using a four-point scale (don't have = 1, which was understood as 'don't have it in any way that is worth counting'; bad = 2; so-so = 3; good = 4). Although condensing the number of Likert anchors may have made the instrument more acceptable to the respondents and facilitated the interviewer's administration of the instrument, it inevitably lowered the variability of responses.

The options considered for the phrasing of the goal attainment part of the BGA scale question were in terms of satisfaction and happiness. Appropriate words in Bangla were identified; the word for satisfaction (santusta -শন্তুষ্ট) was selected as it best captures the sense of subjective evaluation, as well as being widely understood. When considering options for the importance scale local researchers suggested that the word for 'importance' *guruta (*গুরুত্ব) was 'abstract' and not commonly used in colloquial Bangla. Other options included words for necessity *prayojan* (প্রয়োজন) and darkari (দারকারী) both of which were thought to be more acceptable to the respondents. Efforts were made to explore this during the pre-testing stage. It was concluded that the wordings in terms of necessity sounded more 'natural', making them more acceptable. Although the two words for necessity are used interchangeably, the word *darkari* is more commonly used in everyday spoken Bangla, and easily understood by all respondents irrespective of geographical background.

After discussion, it was decided that 5 anchor Likert response scales should be developed. Developing the phrasing of the Likert response scale in the Bangla language in terms of familiar and functional equivalents to 'a little' 'moderately' etc. required understanding of both languages in terms of semantics and syntax (Wilss, 1982). The emphasis was on achieving an equivalent meaning and not a literal translation. Establishing equivalence between response categories is complex; while endpoints such as 'completely' or 'not at all' are universal, shades of meaning between endpoints (e.g. slightly' 'moderately' etc.) are more ambiguous, difficult to translate, and subject to cultural variation in interpretation. The complexity is illustrated in the development of response scales for the WHOQOL, and efforts to establish equivalence between response categories in nine regions of the world (Szabo et al., 1997). For example, "quite often" in England appeared equivalent to "often" in

India, “from time to time” in Zambia, “sometimes” in Melbourne and Seattle, “now and then” in the Netherlands, and “usually” in Zagreb.

Initially, I considered bipolar response scales (i.e. having two opposite poles). I reviewed existing Likert type scales in English and identified commonly used response anchors for bi-polar scales with five response anchors. Based on these I drafted several different response scales for the goal satisfaction and goal necessity scales in English and asked local researchers to translate them into Bangla. These were then back translated into English by another researcher. Table 8 shows an example of one of the bi-polar scale that was developed and considered.

Table 8 Example of bipolar response scale to satisfaction question.

How satisfied are you with …?	Very dissatisfied	A little dissatisfied	Neither satisfied nor dissatisfied	A little satisfied	Very satisfied
আপনি কতটা সন্তুষ্ট	ভীষণ/ খুব অসন্তুষ্ট	কিছুটা অসন্তুষ্ট	সন্তুষ্ট নয় এবং অসন্তুষ্ট নয়	মোটামুটি সন্তুষ্ট	খুব সন্তুষ্ট
Back translation:	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied

However, when reviewed it was felt that respondents unfamiliar with questionnaires and rating scales, as they are in Bangladesh, would find bipolar scales particularly confusing. Feedback from local researchers also suggested that the middle or neutral point of such a scale ‘neither satisfied nor dissatisfied’ would be particularly difficult for respondents to understand. Bipolar scales may also have been more susceptible to acquiescent response bias, e.g. a greater propensity to agree with items, which is particularly prevalent among South Asian populations, and populations of low literacy (Meisenberg and Williams, 2008).

Instead unipolar scales are more easily understood and place less of a burden on respondents, as they are not required to ‘balance’ two attributes. I reviewed and identified commonly used wordings of the anchors of existing 5-point unipolar scales in the English language for translation into Bangla. When translating the anchors into Bangla, there was some difficulty in identifying anchors in Bangla which differentiated between points 4 and 5 (‘very satisfied’ and ‘extremely satisfied’) and this is evident in the back-translation into English. Table 9 shows the response anchors for the five-point satisfaction scale.

Table 9 BGA goal satisfaction response anchors

How satisfied are you with …?	Not at all	Slightly	Somewhat	Very	Extremely
আপনি কতটা সন্তুষ্ট?	একদমই না	সামান্য	মোটামুটি	অধিকাংশ ক্ষেত্রে	সম্পূর্ণভাবে
Back translation:	Not at all	A little	Moderately (more or less)	Mostly	Completely

When considering options for the importance response scale, I again considered a five Anchor scale (similar to that of the satisfaction scale). However, this was again difficult to translate into Bangla, e.g. it was not possible to identify suitable anchors in Bangla to differentiate between points 4 and 5 'very (much needed)' and 'extremely needed'. I reviewed the three-point scale used by the WeDQoL (1 = Not necessary; 2 = Necessary; 3 = Very necessary), and concluded that it would be useful to separate 'not necessary' – and possibly irrelevant – from 'a little necessary', which was further explained as 'something that it would be nice to have but that you can do without'. This resulted a four-point BGA necessity scale (Table 10).

Table 10 BGA goal importance response anchors

To be happy and live well, how much do you need the following things?	Not at all necessary	A little necessary	Necessary	Very necessary
আপনি সুখী হতে এবং ভাল সুন্দর জীবনধারণ জন্য কতটা প্রয়োজন...?	প্রয়োজন নেই	সামান্য প্রয়োজন	প্রয়োজন	খুব প্রয়োজন
Back translation:	Not needed	Needed a little	Needed	Very much needed

It would have been preferable for the satisfaction scale and necessity scale to have the same number of anchors and to be worded similarly, as this would have allowed me to readily make comparisons between the necessity and satisfaction scores for an item. However, there may be some benefit in having the necessity and satisfaction response vary in the number and wording of anchors. As respondents moved from one stage of the instrument to the next, the variation in the number and wording of the response scales may have encouraged them to refocus on the task at hand and reduced respondent fatigue[80].

5.2.3 REVIEW AND CONTENT VALIDITY BASED REDUCTION OF ITEMS

The purpose of this stage was to conduct a review of the pilot BGA instrument and identify and solve potential problems relating to the goal item pool, and necessity and satisfaction

[80]i.e. respondents becoming bored, tired or uninterested

response scales. This stage relies upon reviews of the pilot BGA instrument by experts and respondents representative of the target population. The specific aims are:

- To assess the comprehension of key phrases in each goal item,
- To elicit suggestions for improvement of item wording where necessary,
- To assess the applicability of the different questions. and relevance of the goal items to women of different backgrounds (e.g. socioeconomic status, educational level, location)'
- To assess understanding and interpretation of response options, and
- To explore how interview techniques may be improved.

5.2.3.1 REVIEW BY EXPERT PANEL

As indicated previously, the judgement based 'expert' evaluation of the items for the BGA scale should be considered an ongoing process. In Dhaka, during the review and preliminary writing of the BGA scale, I was able to consult and work extensively with colleagues in the Social and Behavioural Sciences Unit (SBSU) of the Centre for Health and Population Research. Several of these researchers had previously been involved during the WedQoL Phase 1 fieldwork.

For a more formal expert evaluation of the face and content validity of the BGA scale, with a view to further item reduction, a group of nine 'experts' were identified and requested to act as reviewers[81] (see Appendix B for members of expert panel). These were researchers from three organisations[82], representing a diversity of viewpoints and specialisations, and regarded as knowledgeable and experienced of the research sites. The reviewers received the proposed questionnaire, a description of the objective of the study, and referential definitions of each of the goal items for the examination of content validity (Appendices C and E).

The content validity assessment part of the form used a 4-point Likert-type format to assess each item's relevance (1-not relevant, 2- somewhat relevant, 3- quite relevant, 4-very relevant) in relation to the construct (goal attainment) that it is supposed to assess.

Seven of the persons approached completed the task as requested, and three of them made brief comments and suggestions (see Appendix D for a summary). Individual item content validity indexes (CVI) (Polit and Beck, 2006) which are simply a measure of the proportion of reviewers rating an item as 'quite relevant' or 'very relevant' were computed (Appendix

[81] A minimum of three experts has been advised, but that more than 10 are probably unnecessary (Lynn 1986; In Polit & Beck 2006b)

[82] BRAC and FIVDB are non-governmental development organizations. ICDDR,B is an international health research institution.

4). The reviewers' comments regarding overlaps between items, and suggestions for rephrasing were considered, and many changes were implemented leading to a further reduction in the number of items to around 80 items. Items requiring attention were noted in preparation for the review exercises with target participants. I also benefited from being able to discuss other aspects of my study with several of the expert viewers.

5.2.3.2 REVIEW BY TARGET RESPONDENTS

In addition to the expert reviews the input of respondents from the target population at this stage was important to ensure content validity. Respondents may identify new items such as location or life course specific items that have not been included. This stage is also an opportunity to pre-test the phrasing of questions and response scales employed. Any claims regarding the validity of measures require an analysis of questions from the perspective of the target respondents in terms of evaluating how respondents interpret the questions and therefore what the tool is actually measuring (Bowden et al., 2002).

Two methods were used to elicit feedback from target respondents: expanded interviews with individual respondents as well as group discussions or focus groups.

The individual interviews employed cognitive interview techniques. Cognitive interview techniques aim to explore the mental processes respondents use to answer survey questions, and have been widely used in the development of scales (Barofsky et al. 2003; Irwin et al. 2009; Collins 2003). Specifically, these methods focus on four stages: 1) how respondents understand and interpret the questions, 2) how they recall information that applies to the question, 3) the judgments they make as to what information to use when formulating their answers, and 4) how they respond to the questions. There are two main cognitive techniques that have been used: think aloud interviewing, and retrospective probing (Collins, 2003)[83] .

Purposive sampling was used to recruit a total of 12 women across the two sites, representing the range of women in the target population (in terms of age and significant socioeconomic variables) (see Appendix H). Two iterations of cognitive testing took place in each site in order to provide an opportunity to review and make modifications to the goal items between the moderations.

The respondents were informed that a questionnaire was being developed to be used with women, such as themselves, in order to understand the things that were important to them, and how they were doing in their lives. They were also told that their help was needed to

[83] An example of the use of cognitive interviews was given in Chapter 3 when discussing the procedures followed during the validation of the WHOQOL-Bref. in Bangladesh (Zeldenryk et al., 2013) , with a discussion of the advantages and disadvantages of these two approaches.

determine whether the questions were appropriate, and understandable. To minimize respondent burden, each respondent was presented with a section of the goals scale consisting of around 20 to 25 items. The aim was to have at least 4 persons review each goal item. Respondents were asked to respond to the items (i.e. rate the items in terms of importance and satisfaction), while 'thinking aloud'. Probes (Table 11)) were used to assess the comprehension of goal items, the understanding of specific terms within items, the information retrieved when considering responses to the necessity and satisfaction rating, as well as general questions regarding the acceptability of items.

Respondents were encouraged to reflect freely to assess the naturalness and comprehensibility of the phrasing of each goal item this was important due to the differences in regional dialects spoken by the respondents). They were also asked to comment on the relevance of the item to different groups of women as well as to suggest any items that we may have omitted. Each interview lasted between 60 and 90 minutes. Detailed notes were made to assess comprehension. Summary sheets for feedback regarding each goal item were prepared and reviewed.

It has been suggested that 10-15 interviews are needed for cognitive interviews for the review of items (Willis, 2005). In this instance, each goal item was reviewed between 3 and 5 times. Since the item pool had drawn on the extensive exploratory work conducted by the WeD project, and due to my participation in that phase of the fieldwork as well as the analysis of the data, coupled with the extensive review of the items with experienced researchers, it was concluded that performing fewer interviews for review of these items, was acceptable. Examples of the data generated from this stage of the pretesting can be seen in Appendix I.

Table 11 Examples of probes

Comprehension of the goal item (What does the respondent believe the question to be asking?)
What does [goal item] mean to you?
What are you thinking of when we ask you about [goal item e.g. household income] ? Ki babtehsen?
Did you have any difficulty understanding this question (probe for reason if Yes?)
Meaning of specific terms (What do specific words and phrases in the goal item mean to the respondent)
Could you explain what you are thinking about when you think of your [household members]?
Retrieval of information(What types of information does the respondent recall in order to answer the question?)
Satisfaction
When we ask you how satisfied you are with [goal item] what are you thinking of/ considering?
You say that you are [e.,g not satisfied], please explain to me why you say that?
Apne boltehsen je apne shintushtoh nah, ... ektu bujhan... kule bolen?
How would things be different in order for you to be [less/more} satisfied?
Apne arohr shontushtoh howahr jonoh ... ki lagbe? Ki poriborten hobe?
Importance
When we ask you how important [goal item] is, what are you thinking of?
Would you explain why this is important / not important?
Acceptability
Is there anyone who would have problems answering this?
Can you think of any reasons of why people would not be able to answer this question?
Can you think of any reasons of why people would not want to answer this question?
General observations
Overall, what did you think about these questions?
Which items were difficult for you to understand?
Do you think that asking you questions such as this gives me a good idea about how well your life is going?
Comprehensiveness
I've asked you about issues related to ..... Is there anything else that we should ask about, related to this issue, that is important to people such as yourself?
Phrasing of weighting question
How important is this item for you to live well?
Would your response be different if I were to ask you how necessary it is?
Please explain why?

Group exercises were also held in both Dhaka and Sylhet at different points during the item development and pretesting phase. As anticipated that the interaction between participants in group exercises and focus group discussion lead to a greater and richer quality of information being generated in a shorter time (compared to individual interviews), and further issues emerged as for the participants 'sparked' ideas off one another (Lederman, 1990; Robertson et al., 2009, McColl, 2004). Peer group effects may result in greater candour and provide an atmosphere where participants are more inclined to disclose their thoughts. However, it was also important to ensure that the group exercises were not dominated by one or more individuals (Barbour and Kitzinger, 1998, p. 123), which may occur if a group consists of women from a range of socioeconomic status and with differing literacy levels. The groups were carefully observed during the group exercises, if it was felt

that one or two members were dominating the discussion and that certain group members were not participating the facilitator would intervene.

The participants consisted of pre-existing groups, clusters of people who already knew each other, either living in close proximity to one another or who were known to the NGO through their membership of groups (e.g. an adult literacy group run by FIVDB).

The group participants were of a range of ages and of differing socio-economic status; however, this did not appear to impact interaction within the group adversely. Groups were kept to between 6 and 8 participants; this number was sufficiently large enough to gain a variety of perspectives without becoming difficult to manage or fragmented (Krueger and Casey, 2009). Details of the five groups are given in Appendix K. Different exercises were utilized during these group sessions in order to structure the discussions and encourage the participation of the participants.

Using a set of cards printed with a goal item under consideration for inclusion in the BGA scale, participants were encouraged to explain and discuss their understanding of each item. They were encouraged to explain why it was important for them to' live a good life', and what would indicate a satisfactory level of attainment. In some groups participants were then asked to group items depending upon how important they were. This exercise led to group members spontaneously discussing and justifying the placement of each item as they reached consensus, with little direction from the facilitator. In two of the groups after some explanation, more literate participants could conduct the exercises themselves; one or more of them read aloud from the cards while the remaining group members participated in the discussion regarding the meaning of the goal item and the subsequent placement of the card in relation to its importance.

Participants of the group exercises were asked whether there were any issues that had not been addressed in the list of goal items. In Dhaka, several items were suggested for inclusion. One of these items 'cooking arrangements'[84] was later added to the goal items for administration in Dhaka. Another suggestion 'living in a violence free home' was not added after discussion with other researchers. It was decided that the sensitive nature of the question may disrupt rapport building between the interviewer and the respondent; in addition, responses to the question would be particularly susceptible to social desirability bias. Moreover, the respondent would be able to take this issue into account, if necessary, when considering their response to questions regarding their relationship with the husband or relationship with other members of the family.

[84] This relevance of this item is explained when discussing the urban site (see 5.3.1.2).

Notes were taken of key comments and explanations that arose while participants discussed their understanding of each item, why it was important and what a satisfactory level of attainment entailed.

The processing of reviewing the goal items and response scales, using the individual interviews and group exercises, supports the face and content validity of the BGA instrument. The item content of the final BGA instrument is shown in Table 12.

Table 12 Goal item content of the BGA instrument

	Goal item label	Full wording
1	AccessInformation	access to useful information
2	AccessToInfluentials	relationships with influential people
3	AssistingOthers	being able to help others
4	BeingAtPeace	having peace of mind
5	Business	household being involved in business
6	Character	being of good character
7	Children	having children
8	ChildrenAchievements	children's achievements
9	ChildrenBehaviour	children's behaviour
10	ChildrenUpbringing	good upbringing of children
11	Clothing	clothing worn by household members
12	CommunityAssistance	assistance received from communtiy in a time of need
13	CommunityDecisions	household's particpation in community development
14	CommunityDevelopment	household's participation in community decisions
15	CommunityFestivals	household's participation in community festivals
16	CommunityOrganisations	household's participation in community organisations
17	ConvenienceGoods	the convenience goods your household owns
18	CookingFacilities	your cooking facilities
19	EducationalInstitutes	the educational institutes in the area
20	Educationfamily	the educational attainmnet of your household members
21	EducationSelf	your own educational attainment
22	Electricity	your households access to electricity
23	Equipment	equipment that your household has
24	FamilyHardworking	family members are hard working
25	FamilyObligations	meeting family obligations
26	FamilyRelations	relationships between family members
27	FamilyReputation	reputation of the family
28	FamilyRespect	the respect of the family
29	FamilyWorkSkills	the working skills of family members
30	Food	food consumed by household
31	FoodProduction	food produced for own consumption
32	Friendships	being able to form and maintain friendships
33	HealthFamilyMembers	good health of your family members
34	HealthSelf	your good health
35	HouseholdGoods	household goods that you own
36	HouseOwnership	owning a permanent home
37	Housing	condition of your housing
38	IncomeHousehold	household's income
39	IncomePersonal	personal income
40	InLawsDecisions	participation in decsions of your marital family
41	InLawsRespect	being respected by marital family
42	InLawsSupportHelp	help and support you receive from your marital family
43	KnowledgeAndSkills	having useful knowledge and skills
44	LandHoldings	household's landholdings
45	Leaders	leaders of the community
46	Livestock	household owns livestock
47	Loans	access to loans
48	LocalityClean	how clean this area/locality is
49	LocalitySafe	how safe this area/locality is
50	Markets	the markets in this area
51	Marriages	marriages
52	NeighbourhoodRelations	the relationships you have with your neighbours
53	OccupationalSuccess	your success in paid work
54	PersonalRespect	how much you as an individual are respected
55	PersonalWealth	personal wealth
56	Phone	having a phone
57	PhysicalAppearance	your own physical appearance
58	Recreation	your opportunities for recreation
59	RelationsHusband	good relationship with your husband
60	RelationsNatal	good relationship with your natal family
61	Religion	your practice of religion
62	Rest	opportunities for rest
63	RoadsAndTransport	roads and transport facilities in the area
64	SafeWater	household's access to safe water
65	SalariedJob	members of hosuehold holding a salaried position
66	SavingsHousehold	households money savings
67	SavingsPersonal	personal savings
68	SelfEmployment	household members being self-employed
69	ServicesGovt	government provided services
70	ServicesHealth	health services
71	ServicesNGO	NGO provided services
72	Toilet	household's toilet
73	TrustworthyFriend	having a trustworthy, close friend
74	Vehicle	household's ownership of a vehicle

5.3 STEP 3 : FIELD TESTING OF THE BANGLADESH GOAL ATTAINMENT SCALES (BGA)

In this section I discuss the procedure followed for the main field-testing of the BGA scale (Step 3). This includes discussion of issues around the selection of the research sites, the training of interviewers and ethical issues.

Field testing of the questionnaire was done to generate data from target populations for further item reduction (data based) and scale purification. The data will also be used to assess the psychometric properties and dimensionality of the measure.

5.3.1 SELECTION OF THE STUDY SITES

The study sites consist of an urban slum, or *bustee*, in Dhaka City, the capital; and a rural location in Sylhet, a northern district of Bangladesh, shown in Figure 3**.**

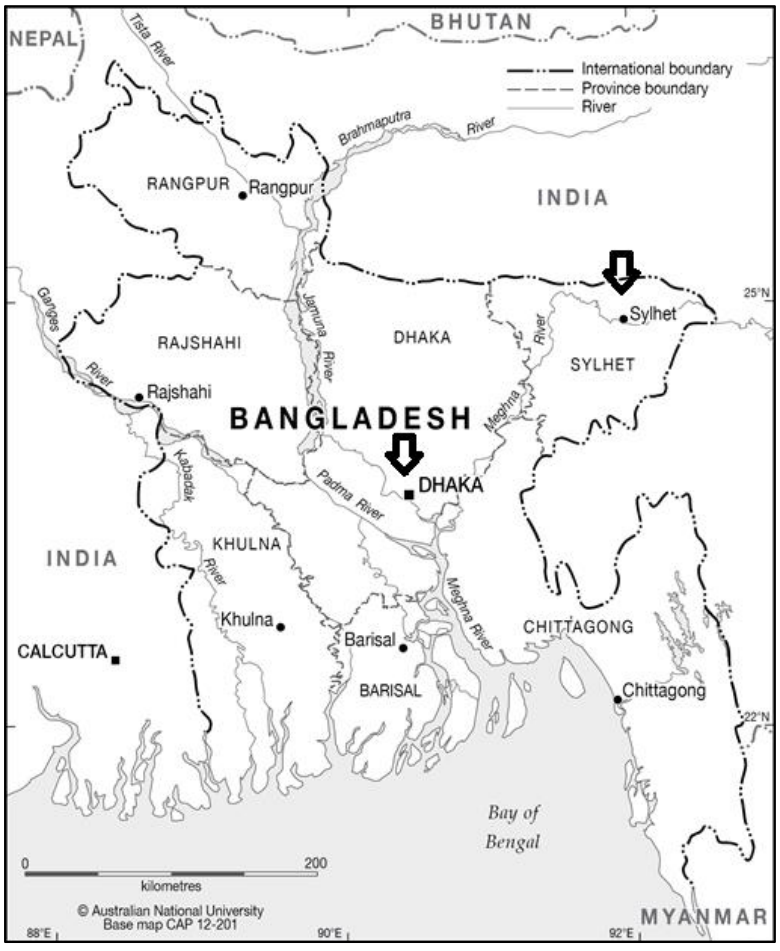

Figure 3 Location of study sites. (Source: Australian National University.)

These are two sites with considerable differences in service provision, social structure and the socio-economic characteristics of the respondents. It is expected that women's goal priorities and goal satisfaction will differ significantly in these two sites. Differences

between the sites must be considered when examining the data, with attention to differences in the socio-demographic and economic characteristics of each site's sample respondents. Field testing the instrument in two different areas within Bangladesh provided additional evidence for the validity of the BGA instrument, and its appropriateness for use with different groups of women in Bangladesh.

5.3.1.1 THE RURAL SITE

Several options were considered for the setting of the rural study. I decided to choose the district of Sylhet because I am familiar with the area because of family connections, and am proficient in the local language[85] which was advantageous both during the fieldwork and analysis. Practical constraints determined the location of the site within the district; of importance was the need for the female interviewers and myself to be able to travel to and from the site independently each day, which would not have been possible with a more remote location.

The chosen site consisted of a cluster of villages located approximately 10 km from the metropolitan centre of Sylhet (Figure 4). Prior to the construction of a bridge in 1996, villagers had to cross the River Surma by boat to reach the main road leading to Sylhet City. For the villages further from the bridge, the river crossing remains an important route, particularly for the transportation of goods, as it costs less in terms of time and money. Although having good links to the metropolitan centre, the site was described as a rural site in terms of the service provision, demographic of the population, and occupations of the residents by FIVDB staff. At the time of the study FIVDB, had been active in the site for over 10 years, its activities in the site included primary education through a school, and livelihood advancement through financial services and training.

[85] This was relevant during the pretesting interviews and focus groups, and for the conducting of the 'Add On 'components which generated qualitative data. It should also be mentioned that formal Bangla is widely understood, such that although the participants in this site spoke in the Sylheti dialogue, there was no need to adapt the survey and scales for administration in this site.

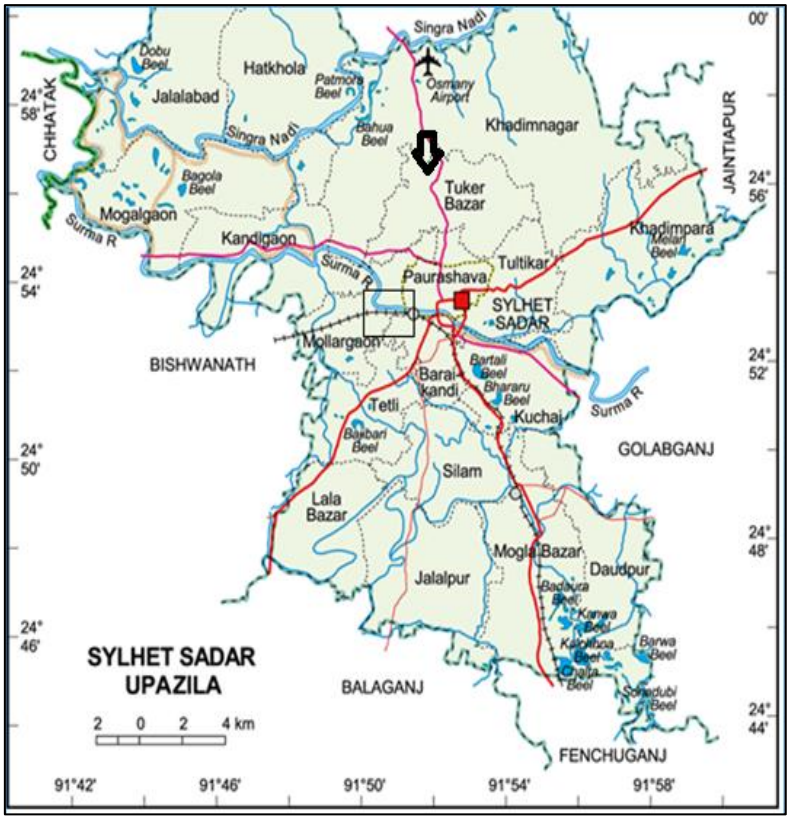

Figure 4 Map of Sylhet Sadar Upazila indicating location of study site (Source: Banglapedia, www.bpedia.org)

Overall amenities in the villages were good. A paved road ran throughout the site connecting the several villages, and many of the inner roads within the villages were also paved. The vast majority of houses were, at least in part, of pucca[86] construction, and were connected with gas, electricity and water supplies. Homesteads located in the farther corners of the sites were less well served. Overall, better-off households and those located closer to the main highway and bridge enjoyed better amenities.

Villagers are employed in a range of employment activities including farming, laboring, businesses of various scales (based in the village itself as well as within Sylhet City); and salaried positions in various government and private organizations. Most women were housewives. The nature of income generating activities means that many household members frequently travel to Sylhet town. Many households were reliant on remittances from family members who are residing abroad (particularly the Middle East, but also the UK).

The major market place within the site was located close to the river bank, and boasted a large '*kacha bazaar* (fresh produce market), several restaurants, and tea-stalls. There was a

[86] A pucca structure is one made from materials resistant to wear, such as brick.

pharmacy at which a traditional medical practitioner (*kobir*aj) was available several times a week, and a hardware store. Non-traditional businesses included a cable-TV provider and telephone services (where customers pay to make calls using a mobile phone). A much larger market area, where agricultural produce was sold wholesale, was located just across the river. Throughout the site there were several small general stores selling small quantities of a range of goods: some groceries, food snacks, and toiletries (including cosmetics such as face cream and make-up) and hair accessories.

There were in total three primary schools located within the site, two of these were run by NGOs (FIVDB and BRAC). The secondary schools serving the area included one in an adjacent village about 2 km. away, and another located across the river close to the main highway. Residents of the site favoured the school in the adjacent village, even though it was further away, as travelling to it did not entail crossing the river. It was apparent that the need to travel outside of the villages to attend high school inhibited girls continuing their schooling. Older children from some better off families were studying at colleges within Sylhet town. A small number of male youths were students at the Shah Jalal University in Sylhet.

5.3.1.2 THE URBAN SITE IN DHAKA

In the 12 months prior to my fieldwork, the Dhaka City Corporation (DCC) had led a drive to evict slum dwellers, which had led to the demolition of numerous illegal slum areas around the city. I met with researchers from different organizations to seek their advice as to where I should conduct the study. A major point of consideration concerned the duration of the proposed fieldwork in light of the upcoming rainy season which would mean that slums such as the Korail[87] slum in Gulshan, which consists of dwellings constructed on bamboo scaffoldings over a lake, would be susceptible to flooding. This would have disrupted the planned fieldwork. There were also concerns regarding the safety of myself and research assistants in 'illegal' slums, especially during a time when demolitions were taking place.

[87]The Korail slum was the largest slum in Dhaka, home to at least 40,000 urban poor, over 69 hectares of government land.

After discussion with staff of FIVDB, the Beribadh area located in Mohammedpur Thana in Dhaka was identified as a suitable location. The area which is extremely overcrowded with poor environmental conditions fulfilled the criteria of the definition of slums[88].

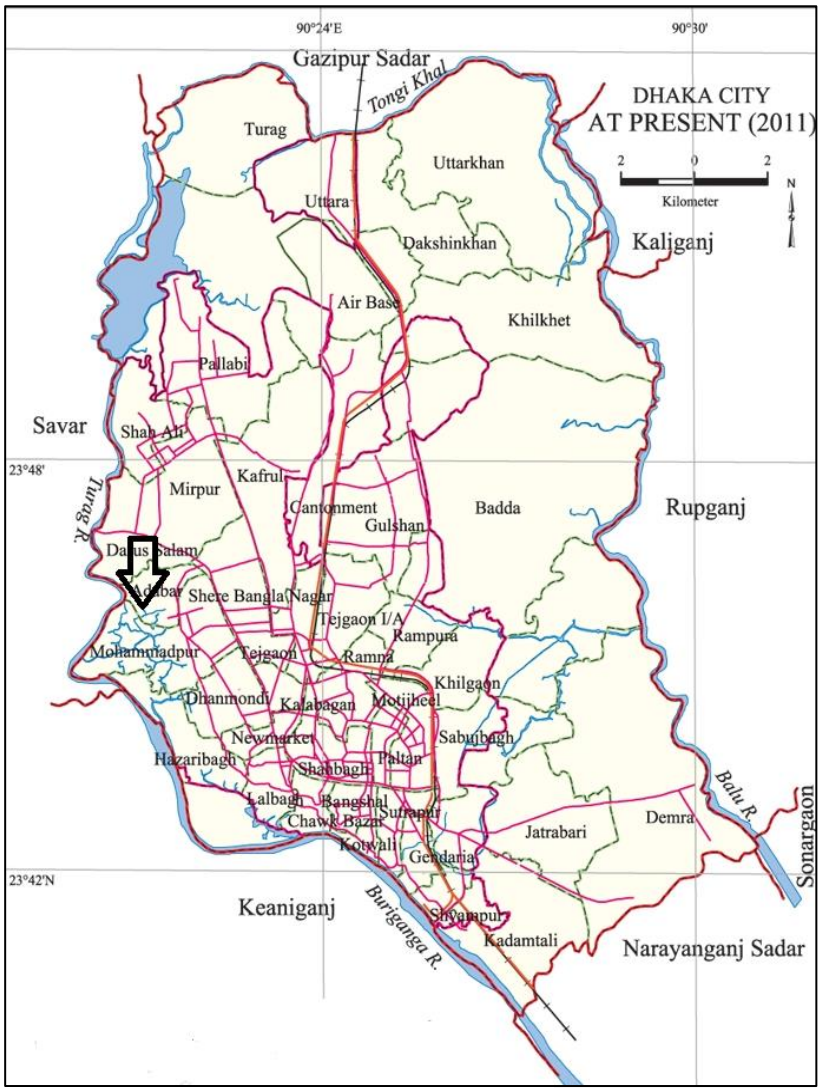

Figure 5 Map of Dhaka City indicating location of study site
(Source: Banglapedia, www.bpedia.org)

The site is a low-lying area, susceptible to flooding, which is flanked by the City [Flood] Protection Embankment alongside the Buri Ganga River. The embankment which connects Sadar Ghath and Gabtali is government-owned land, the adjacent slum area is situated on privately owned land. Forms of transport within the site were commonly rickshaw, although

[88] The 2005 census and mapping of slums in Bangladesh (Angeles et al., 2009) defined alums as settlements of at least 10 households which also meet at least 4 of the following criteria: 1) Poor housing conditions; 2) High overall population density (> threshold of 300 persons per acre and predominantly > 75% single room occupancy); 3) Poor sanitation and inadequate water access; 4) High proportions (over 75%) of people with income below the poverty level, or a monthly income <5,000 Taka, and 5) insecure land tenure.

buses link the site with Motijheel, the commercial centre of Dhaka, as well as New Market, Gulshan and other parts of Dhaka City.

Few of the internal roads are paved, sewerage and drainage in the area was lacking, rubbish collection appeared to be nonexistent. The 'better off' residents are the tenants of private landlords; it is a common practice for the owners of plots of land to construct a usually one storied building (sometimes pucca) and to rent out single rooms, to safeguard against their property from being seized by criminal elements (*mastaans*). Most of the plots are 720 sq. ft. (3 kathas) in size. We found up to 16 families residing within one building, each living in a single room estimated to be around 100 square feet, sharing 4 latrines, a wash room and a kitchen area (which was usually an alcove housing between 2 and 4 stoves). Those in pucca constructed buildings often did have legal connections to electricity, and a smaller proportion had gas connections and running water. Residents of dwellings further from the main road, and nearer to the embankment, were usually squatting on land illegally. Their dwellings were constructed of thatch; access to electricity was low and illegal. These households relied on wood stoves, and often had no toilets, relying instead on open wasteland spaces or hanging toilets situated over adjacent small water bodies for defecation. Obtaining water meant queuing for long periods at taps illegally connected to the city's water supply, or collecting it from the nearby pucca houses, usually in exchange of payment. The internal water bodies as well as the canal running through the site were clearly polluted with garbage, human waste; and according to residents was contaminated with the toxic effluence from the tannery industries located upriver at Hazaribagh.

5.3.2 SELECTION OF PARTICIPANTS

Participant selection in both sites was subject to practical constraints. The aim was to sample a full range of experiences of women aged 20-45 residing in each site. This age group of women are of reproductive and working age and are often the target of development projects. Any systematic sampling technique relies on access to a database to allow an adequate sample to be drawn. A sampling frame was not available for either of the sites (urban and rural), nor was it possible to conduct a household listing in either site due to the time and resource constraints.

As a result, I adopted a convenience sampling approach careful to ensure that all groups residing in the area were represented (i.e. socioeconomic, religious, ethnic, and age). As much information as possible was obtained regarding the characteristics and circumstances of respondents residing in each of the sites through detailed discussions with local staff from FIVDB familiar with the sites. The research team spent at least one day in each site accompanied by the NGO staff prior to the commencement of data collection. During this period, we were introduced to key persons residing in the sites and became acquainted with

the sites through a walkthrough in order to gain an understanding of the differing circumstances of respondents residing in the areas. This was followed by further discussion with the NGO field staff. With this information interviewers were instructed to ensure that the surveyed participants included a spread across the age range of 20 – 45 years and wealth categories, and from different residential areas within the sites. Although the relative wealth of a household was difficult to ascertain prior to the interview (and indeed during the interview itself) different categories of housing and employment statuses of inhabitants were used as a proxy to give an indication of the household's wealth category.

In addition, during the fieldwork, interviewers were encouraged to visit the site at different times of the day to be able to include women in the sample from different occupational groups and circumstances. This was particularly important in the Dhaka site: e.g. domestic workers will generally be working during the mornings and will only be available for interview in the afternoon or evenings; certain groups of factory workers, such as garment workers, will be unavailable in the evenings.

5.3.3 THE RESEARCH TEAM AND THEIR TRAINING

In Dhaka interviewers were individuals, with social science backgrounds who had experience as data collectors for other projects at ICDDR,B. By and large this group were able to conduct the data collection independently with little supervision. This was important as fieldwork in the Dhaka site required the interviewers to conduct interviews at different times of the day and throughout the week. The Sylhet team consisted of students studying sociology and anthropology at Masters level. Being younger, and far less experienced, I ensured that I was on-hand throughout the fieldwork to answer any queries.

In both sites interviewers conducted the survey and completed the questionnaires as levels of educational attainment are low in Bangladesh, and the target respondents are unfamiliar with the format of a questionnaire.

In Sylhet it was necessary for the main research assistants to be female (this is discussed further in 5.3.3). In Dhaka both male and female research assistants were engaged throughout the study. The main research team in Sylhet initially consisted of 5 females and 3 males, at a later stage a further 3 females were recruited. The team in Dhaka was initially made up of 5 males and 3 females, two of the interviewers (one male and one female) left the project halfway through the fieldwork due to prior work commitments.

In both sites, the teams of interviewers received extensive training lasting around 5 days, in which the aims of the study were discussed. The different sections of the data collection instrument were explained to the interviewers so that they understood the purpose of their task.

I also encouraged the team members to share their ideas regarding how best to identify and approach potential respondents, and to discuss what other problems may arise and how they could be dealt with.

As part of their training each of the research teams conducted a grounding and piloting study. I took the teams to locations with similar characteristics to the research sites, for them to spend 2 days conducting surveys. During this time, I accompanied each of the interviewers, as they walked through the site, approaching and introducing themselves to potential respondents. I also observed each of the interviewers conducting at least two interviews. I then held a one-day workshop during which the interviewers were asked to share their thoughts and observations or raise any issues for clarification. I also gave them feedback, based on my observations, of how to approach potential respondents and provide information about the project. As it was particularly important to standardize questionnaire administration between interviewers prior to the main data collection, each part of the questionnaire was discussed in detail. I also periodically accompanied individual interviewers and observed them conducting the interviews throughout the duration of the fieldwork period, to circumvent any problems in the administration of the survey. 'Refresher' sessions were also held during the fieldwork to ensure that the field assistants were adhering to the instructions that they had received. The team were also sensitized regarding the anticipated ethical issues that may arise during the fieldwork (this is discussed further in section 5.3.5).

5.3.4 DATA COLLECTION: MATERIALS AND SAMPLE SIZES

Several tools and methods were employed during data collection, reflecting the aims of the thesis to evaluate the psychometric properties and utility of the BGA scale generating both quantitative and qualitative data. The main data collection took place between April and August of 2008.

5.3.4.1 FIELD-TESTING OF BGA INSTRUMENT

For the main field-testing of the BGA instrument the required sample was 400 respondents. The rationale for the sample size at this stage was guided by the requirements for the planned statistical analysis[89]. In Sylhet 399 respondents completed the questionnaire, in Dhaka the number was 394.

[89] The planned factorial analysis of the data from the satisfaction and importance scales of the BGA determined the required sample size. The aim was to have at least 5 cases for every variable (i.e. goal item). Since there are 74 goal items in the Dhaka scale, the minimum required sample is 370 respondents. The issue of the sample size requirements for factorial analysis are further discussed in Chapter 7.

Information regarding the respondent's age, educational attainment, employment status was collected. Questions concerning household income were not included as experience from other such surveys in Bangladesh shows that it is a time-consuming exercise (many women report that they do not know the household wealth) that produces unreliable data. Attempts to ascertain the household's land-holdings in the rural site were unsuccessful. Women often stated that they did not know how much land their households owned (land is usually passed from father to sons), it was also felt that they were reluctant to disclose such information to outsiders. Of the small proportion of the sample that did provide this data, the respondents quoted a number of different local units of measurement (e.g. *katha, bigha, decimal*). Information regarding occupations of household heads and spouses had been collected, but this was difficult to categorise into groups in order to indicate socio-economic status for further analysis.

Other information was collected to determine the socio-economic status of the household.

This included educational attainment of the household head, overall literacy levels of household members, information on the quality and size of housing, home ownership, access to sanitation, quality of food and media exposure[90].

The Satisfaction with Life Scale SWLS (Diener, 1984) which is a 5 item scale designed to assess global life satisfaction was also included in the data collection schedule (the 5 items address cognitive evaluations of one's own life in terms of ideal life, wish for change, and current and past satisfaction). The scale has previously been adapted and used in Bangladesh by the WeD Group and was available for use (Woodcock, 2006). Since QoL and life satisfaction are described as related concepts, a moderate correlation between scores on the SWLS and BGA scale and subscale scores are expected. I will test this as part of the construct validation of the BGA instrument.

I also wanted to include a more qualitative aspect in my data collection in order to gain a better understanding of how different aspects of life and life experiences contribute to people's experience of wellbeing (c.f. Davis and Baulch, 2011 who combine survey and life history data).

[90] These questions were part of the Multidimensional poverty measurement tool (Bhuiya et al., 2007) a tool designed to measure poverty in its multidimensionality where it views poverty as an inadequate fulfilment of the following basic needs: food, clothing, shelter, health, education, and social involvement. Each dimension is evaluated through 4 items in the scale. The scale score ranges between 24 and 72 and is constructed in such a way that the score increases with increasing level of poverty. In the initial validation study the scores obtained converged with poverty groupings derived through PRA exercises, and correlated with traditional indicators of socio-economic status such as land ownership, asset index scores and occupation (ibid).

A small group of respondents (n=17) took part in an extended interview (life history style) interview (9 in Sylhet, and 8 in Dhaka). The extended interviews were conducted by myself in Bangla with the assistance of one of the interviewers. The interviews ranged duration from around 50 minutes to 2 hours, and in some cases necessitated a second visit, depending on the availability of the respondents. At the start of each interview the background information of the respondent was quickly verified. This was followed by an exploration of key moments in the respondent's life such as significant life events (date of marriage, birth of children, death of significant family members), as well as significant moves (changes in residential locations).

The interview then proceeded by asking the respondents to describe their 'situation' during different periods of their life; terms such as *obosta* (condition) and *dinkal* (how days are going) were used to denote the overall 'condition of life'. Periods of bad *obosta* and good *obosta* were noted. These reference points were then used to structure deeper discussion.

5.3.5 ETHICAL CONSIDERATIONS

5.3.5.1 INFORMED CONSENT

A fundamental principle of research ethics is that any participant agreeing to participate should do so voluntarily, with sufficient knowledge and understanding of the research objectives, and what their participation will entail. These principles are essentially grounded in understandings of individual autonomy and decision making capacity originating in western industrialized nations where personal autonomy is emphasized (Marshall et al., 2007, p. 207). The difficulties and appropriateness of implementing these 'western 'standards for informed consent in developing countries has been the subject of considerable discussion (ibid).

In this instance, potential participants (at each stage of the data collection) received a verbal description of the content and focus of the research. They were then asked whether they would like to participate, with the option of declining clearly stated. Due to the low educational attainment of many of the respondents, requesting written consent may have caused embarrassment, and disrupted rapport building between the interviewer and respondent. In addition, respondents in such settings are often suspicious and fearful of signing any documents. As a result, verbal consent was deemed to be appropriate and adequate. This is common practice in Bangladesh. It was stressed to the interviewers that they should ensure that any potential respondents understood that the questionnaire would take some time to complete and that they were also aware that they were free to discontinue the interview, and to withdraw permission to use their data at any point. It was important that the study should cause minimal disruption to the participants' daily activities. Since the majority of respondents provided their responses orally the interviewers were able to conduct

the interviews whilst the women continued with their household tasks such as preparing food and cooking. If it was not possible to complete the interview at the first meeting, the interviewer arranged a mutually suitable time to revisit the respondent.

In addition, it was important to ensure that the participants understood that their participation in this study was for the purposes of research, and that neither the study nor I were linked with any development organization, from which they might benefit (the possible impact of the researchers affiliation on respondents answers to quantitative surveys has been discussed by Schwarz and Oyserman, 2001). This was particularly important, as we had initially been taken to the site and introduced to members of the community by members of FIVDB's staff.

5.3.5.2 MAINTAINING CONFIDENTIALITY

After consenting to participate, respondents were asked whether it was alright to proceed with the interview straight away or whether they would prefer to set an alternative time and setting. Achieving privacy during the collection of data in the field setting was challenging. The presence of onlookers was a problem in Sylhet, where respondents commonly resided in joint households and where the presence of an outsider elicited much interest from other household members and neighbours.

The interviewers were asked to remain alert regarding the presence and reactions of onlookers and to any discomfort of the respondent. They were advised to, if necessary, move onto less contentious sections of the questionnaire if appropriate, and to return to the skipped section whenever possible. For example, it was anticipated that questions relating to satisfaction with aspects of relationships with the marital family and their family, or whether family members were hardworking for instance, might cause some unease for women responding in the presence of other joint family members.[91]

To counter some of these problems after having the response scales explained to them, and provided that the interviewer was assured that the respondents had understood, respondents were encouraged to respond to questions (e.g. regarding satisfaction with goal items) by stating the number which corresponded to the verbal anchor. To facilitate this the more literate respondents were sometimes shown a card with the response scale on it, which they could refer to as they made their responses. A visual rating aid consisting of tally marks on a

[91] I attempted to examine whether the presence of onlookers impacted on women's responses to the satisfaction and importance scales. Interviewers were instructed to note who else had been present during the interview. In Sylhet it was the norm for several others to be present for at least part of the interview. Although this provided information about the presence of others, it was not possible to ascertain the duration of their presence, and at what stage of the interview they had been present.

card, which was more suitable for less literate respondents was also made available (see Figure 6).[92] Respondents were thus able to indicate their ratings either by pointing to the relevant mark or by merely stating a number. In a small number of cases where respondents could read, and it was felt that they were able to understand the questionnaire and the required task, they completed the goals section of the questionnaire themselves, with assistance from the interviewer where necessary.

Figure 6 Interview aid for satisfaction response scale

Interviewers were instructed to keep completed questionnaires secure, and these were collected from them at regular intervals.

5.3.5.3 WELFARE OF THE RESEARCH TEAM

Ethical considerations during the fieldwork also included consideration of the welfare of the research team. Interviewers were adequately remunerated for their work and received appropriate orientation and training. Prior to the start of fieldwork in each site, team members were introduced to key persons within the sites by the NGO contacts, who were apprised of the study in terms of what the data collection would entail and when this would commence.

During the data collection, the interviewers were instructed not to enter the field sites individually, they were also told not to conduct interviews late in the evening to avoid unnecessary risks. A 'buddy' system was implemented so that they entered and moved through the study sites in pairs, keeping each other informed of their whereabouts as they moved between households or homesteads to complete interviews. All the interviewers owned mobile phones, which meant that they could to communicate with me or another team member at any point.

It was anticipated that the interviewers may be exposed to some distressing stories during data collection, or during informal encounters with persons in the study sites. I ensured that I was readily available, accompanying the team to the field site during data collection, and meeting with them individually and as a group throughout the fieldwork period. These

[92] An alternative visual aid consisting of increasingly happy and unhappy faces was also considered, but after discussion with the research team it was not used; it was felt that respondents may react unfavorably regarding it as childish and insulting, which would impact negatively on their attitude towards the interview.

meetings were an opportunity for them to discuss their experiences and for me to respond to any queries that they may have regarding the data collection instrument and procedures. It also meant that I could hear any reflections that they may have had because of their observations or informal encounters outside of the data collection.

5.3.6 SOME ISSUES ENCOUNTERED IN STUDY SITES

The nature of the study meant that little time was spent in an area and we had little scope for establishing a meaningful rapport with communities. In both sites, despite initial contacts made through the NGO and efforts taken to introduce ourselves to key members of the community and to inform them of the study, the vast majority of respondents were unaware of our study prior to being approached to participate in the study.

In the rural site in Sylhet the presence of outsiders aroused a great deal of interest. A considerable amount of time was taken up at the start of interviews with introductions and explanations regarding the study. This would often have to be repeated several times as other persons entered the setting. The circumstances were made more difficult since the fieldwork in Sylhet started amidst a flurry of reports circulating in the media about kidnappings and murders of women and children from villages in the district. During our fieldwork, we encountered families who were keeping their children away from school in response to these reports. The height of feeling regarding these reports was evidenced by the sight of several ice-cream carts floating in ponds and the river. We were told that angry villagers had seized the vendors and in some cases beaten them because there were reports in the media that the kidnapped children had allegedly been drugged and transported out of villages in such carts.

During the initial planning of the survey, I had envisaged recruiting only female interviewers. I anticipated that in the rural site this would be necessary, since in a conservative environment it would be difficult for males to access homesteads and carry out interviews with women. However, due to concerns regarding the safety of my female research assistants, I decided to add several males to the field team in both sites.

In the urban slum site in Dhaka, the gender of the interviewers did not appear to be an issue at all. Male and female interviewers were equally successful in recruiting and conducting interviews with female respondents

However, in the rural setting, particularly in the more remote areas, young male interviewers faced immense difficulties in entering homesteads. Even when accompanied by one of their female colleagues, the male interviewers frequently failed to establish sufficient rapport with potential respondents. It seemed that the residents of the villages were offended by the sight of unrelated young males and females walking together through the village; and were very uneasy about unknown young men entering homesteads and requesting to speak with female

household members. Despite this, I asked the male interviewers to remain as members of the team. This proved to be prudent for several reasons.

I had expected that the sight of a group of young women in this rural setting would arouse some interest from the residents. I became anxious for the safety of my female interviewers as the survey took us to more remote parts of the site, further from the main road, and where individual homesteads were situated in secluded settings. My fears were confirmed when two of my female interviewers were accosted by a group of local youths and subjected to inappropriate remarks. After this incident I asked the male interviewers to accompany their female colleagues, while maintaining a distance. The presence of the male interviewers meant that they were available to answer questions regarding the study from male members of the community. This was very important as it was evident that men were uncomfortable, and even resentful of us speaking with female family members. I also spent time in public places, such as tea stalls, to give men the opportunity to ask questions regarding the study itself.

On one occasion, my interviewers entered a homestead and found three women residing with their children, under the guardianship of their father-in-law (a widower). Their husbands, three brothers, were working in the Middle East. I entered the homestead and greeted the father-in –law who was pacing up and down on the veranda, and seemed irritated. The three daughters-in-law were inside various rooms of the house with my interviewers. I suspected that the father-in-law was uncomfortable with the thought that his daughters-in-law were conversing with strangers, and that he was not privy to the conversations. I tried to initiate a conversation with him, hoping to put him at ease by explaining who I was and the nature of my study. However, I became distracted when I was called inside by one of my interviewers to answer a query. The following day as my team travelled to that part of the site to continue the survey, we were prevented from passing by a group of men. The group included the father- in- law of the three women interviewed the previous day. This incident highlights the need in such settings to engage with relatives or guardians of women to in effect obtain their permission, albeit tacit, prior to interviewing women. This applies to both male and female guardians. While trying to determine whether a woman might be able to take part in my survey, I often had to informally get the tacit permission of the mother-in-law.

Amidst all this an unfortunate accident in the third week of the fieldwork in Sylhet jeopardized our fieldwork in the site. Late one afternoon, as I was leaving a homestead there was a flurry of activity and shouting coming from another group of houses a short distance away. It became apparent that a young child was missing. While the shouting continued I received a worrying phone call from my interviewers; they were waiting for me to join them and leave the area as quickly as possible. The missing child's mother was in the middle of an

interview when it was discovered that the child was missing. A group of men had gathered in the nearby school playing field, and seemed to be complaining about strangers being present in the village, entering homesteads, and keeping women from their household duties. Fearing that the situation could escalate, I instructed my team to make its way to the main market place, where the auto rickshaw stand was located. I doubled back, avoiding the group of men on the school playing field, and met my team at the auto rickshaw stand. We were relieved to be able to leave without any incident. The following day I learned that the child had been found drowned in the homestead's pond.

Considering the climate of fear that already prevailed in the area regarding reports of child and women abductions, and the obvious animosity that we had encountered in some parts of the village, I was very concerned for the safety of my interviewers. I decided to cease data collection activities in the area until I was certain that my field workers were not being implicated in the incident. I contacted a colleague at the NGO and asked that his field staff make some discrete enquiries over the next few days to gauge the villagers' response to the incident. He subsequently assured me that my research team were not being blamed in any way. Nonetheless, I decided that it would be prudent for us to cease data collection in the surrounding homesteads, at least for the time being. For the next few days we retraced our steps and conducted interviews in homes closer to the main road.

The issues encountered in Dhaka were very different. As mentioned previously the involvement of potential respondents in paid work outside of their homes meant that locating respondents for interview was extremely difficult. The urban residents had very little 'free time'. When at home, they were occupied with household activities. In contrast to Sylhet, the interviewers in Dhaka had to spend considerably more time identifying respondents who were both willing and available to be interviewed. Around 2 weeks after the commencement of the survey in Dhaka (at which stage approximately 230 surveys had been completed), torrential rains resulted in extensive floods throughout areas of Dhaka. The research site became water logged with water levels rising to about 2 feet above the level of the road that led into the site. Moreover, the flood waters had been contaminated with sewage water from the canal flanking the road. Entering the site on foot was impossible, and entering the site by rickshaw was very dangerous as the numerous potholes in the road could not be seen. The residents of the few houses that I was able to visit were walking in water up to a foot deep within their rooms. All possessions had been placed on whatever raised surface was available (usually their bedsteads), or suspended from the ceiling and window grills, and even placed on the roof. Children, and indeed entire families, were forced to spend hours perched on top of bedsteads as the sewage contaminated water flowed through the rooms. I was unable to visit the residents of the thatch houses residing further away from the road and closer to the embankment. I could only conclude that they had been forced to move.

5.4 SUMMARY

In this chapter an overview of the steps followed to develop and field test the BGA instrument, and the planned data analysis for validation was presented. The aspects of validity which are being addressed relating to the BGA were discussed.

This was followed by a detailed account of the actual development and field-testing of the BGA instrument. This included the development of the goal item content and response scales, and how these were reviewed. The rationale behind the choice of study sites was discussed, and some characteristics of the study sites detailed. This was followed by an account of the procedure followed for the main field-testing of the BGA scale including details of the materials used and number of participants at each stage. Ethical considerations of the study were discussed.

In the following chapter (Chapter 6) the results of the frequency analysis of the data collected using the BGA instrument is presented as part of further evaluation of the content and face validity of the BGA instrument.

6 FINDINGS: EXAMINING GOAL NECESSITY AND GOAL SATISFACTION IN THE TWO SITES

This is the first of two chapters in which the results from the statistical analysis of the goal importance and goal satisfaction data of the BGA instrument are reported and discussed.

In relation to the overarching objective of this thesis (i.e. the development and validation of the BGA instrument), the findings from this stage of analysis contribute further to the testing of face validity and content validity of the BGA instrument (see Chapter 5). The findings also provide evidence of the ease of use and discriminative capacity of the two response scales. This initial analysis also serves to screen the data in preparation for further analysis [93] (the findings of which are reported in the following chapter).

The findings from this stage of the analysis are also of interest in and of themselves as they provide insight into Bangladeshi women's conceptualisation and experience of wellbeing in terms of goal necessity and goal satisfaction It is reasonable to expect women living in different contexts with different life situations and experiences (such as those in the two study sites) to differ in their understanding or conceptualization of what it means to live well; in other words, they will prioritize aspects of life differently. The women in the two sites will also differ in their experience of wellbeing. These differences are manifested in the observed responses to the goal satisfaction and goal necessity questions of the BGA instrument.

6.1 OVERVIEW

In the following sections I first discuss issues and considerations related to the management of the data and the treatment of missing values. I then present the result of data analysis of the satisfaction and necessity data of the BGA in the two sites. Lastly, I discuss the computation of necessity weighted satisfaction scores and examine how these differ from satisfaction scores.

[93] The further analysis entails factor analysis (specifically principal component analysis) in order to derive purified goal necessity, goal satisfaction and weighted goal satisfaction scales for the two sites and the combined data (prior to deriving scale and subscale scores). The findings from this stage are presented in the following chapter (Chapter 7).

6.2 DATA MANAGEMENT AND TREATMENT OF 'NON-RESPONSES

Data entry was completed in MS Excel, and subsequent data handling and statistical analysis was performed using SPSS for Windows 16.0 and IBM Statistics 23. Details of the analysis are given in the corresponding results sections in.

In Sylhet 399 women completed the questionnaire, their mean age was 32.55 years (s.d. 8.48 years and range 18 to 53 years). In Dhaka 394 women completed the questionnaire, the mean age of the respondents was 29.92 years (s.d. 9.10 years and range 16 to 54 years). Although the target age group was 20 to 45 years, during the fieldwork it was sometimes necessary to relax the original inclusion criteria due to the difficulties in locating suitable respondents and time constraints.

In terms of the BGA necessity and satisfaction scales; all respondents completed necessity and satisfaction scoring[94] for all items apart from certain items related to children and marriages (these are summarised in Table 13). Non- responses to the items children's achievements, children's behaviour and children's upbringing and 'marriages' had been marked as either 'not applicable' or 'do not have' by interviewers during the data collection.

Table 13 Summary of non-responses in the BGA importance and satisfaction scales in the two study sites.

	Non responses, n (%)			
	Dhaka (n=394)		Sylhet (n=399)	
GOAL IMPORTANCE				
Children's achievements	109	(27.6%)	83	(20.8%)
Children's behaviour	85	(21.5%)	81	(20.3%)
Children's upbringing	114	(28.9%)	28	(7.2%)
Marriages	299	(75.9%)	268	(67.1%)
Relationship with husband	1	(.03%)	2	(0.5%)
GOAL SATISFACTION				
Children's achievements	107	(27.1%)	83	(20.8%)
Children's behaviour	85	(21.5%)	81	(20.3%)
Children's upbringing	114	(28.93%)	28	(7.2%)
Marriages	299	(75.88%)	268	(67.1%)
Relationship with husband	-		2	(0.5%)

For instance, 27.6% and 20.8% of respondents in Dhaka and Sylhet respectively failed to respond to the goal necessity and goal satisfaction questions for children's achievements. The explanations given by the interviewers for the non-responses to the satisfaction and necessity questions was that the item was not relevant to young women who were either yet to have children, or whose children were very young. Similarly, the item children's upbringing was commonly regarded as concerning whether children were receiving

[94] To recap: in the necessity scale of the BGA instrument respondents were asked 'how necessary are the following things in order for you to be happy and live well?' followed by the 73 (or 74) 'goal' items or aspects of life for wellbeing, which the respondents then rated on a 4 point scale as follows: 'not at all necessary' (coded 1), 'a little necessary' (coded 2), 'necessary' (coded 3) and 'very necessary' (coded 4). For the satisfaction scale respondents were presented with the same list of goal items and asked to rate their satisfaction with each item using a 5-point scale: 'not at all satisfied' (coded 1) ,'a little satisfied' (coded 2) 'moderately satisfied' (coded 3),' mostly satisfied' (coded 4) and completely satisfied (coded 5).

schooling, which was also only relevant for older children. Similarly, when considering the item children's behaviour women would talk about how their children behaved, their manners, and how they were regarded by others in the community; for young children, this question was again deemed to be irrelevant.

For the goal item marriages, the response rates were around 25 % in Dhaka and 32% in Sylhet. In both sites, more than two-thirds of respondents failed to respond to this question. After reviewing the pre-testing interviews and information gathered by interviewers from respondents during the early part of the fieldwork, I concluded that the item marriages was being interpreted by the respondents as referring to that of children or other younger family members (e.g. siblings, nephews and nieces)[95], be it existing marriages or prospective marriages. The smaller proportion of non-responses in Sylhet appeared to arise because women were more likely to be living in larger extended households where arranging the marriages of other younger members of the family (e.g. siblings, nephews and nieces) was of importance. In Dhaka, on the other hand, where the majority of women were residing in nuclear families it was largely the marriage of their own children that would be considered. The reason for the high proportion of non-responses was predominantly that children were too young, and that their marriage was not yet something that was a concern. In the case of some older respondents they explained that their children were already married and settled, so that securing marriages for them was no longer an issue.

In the case of questions regarding 'relationship with husband', it was evident that women who were widowed may have difficulty responding. To minimise non-responses to this question I instructed interviewers to adapt the question; when interviewing widowed women, the question would be rephrased to refer to the relationship that they had with their husband while he was alive. Women who were separated or divorced from their husbands readily responded to the questions; they expressed varying degrees of dissatisfaction with the relationship and explained how the breakdown of the relationship contributed to their current situation.

For the initial analysis presented in this chapter the non-responses to the satisfaction and necessity scales for these items have been excluded in the frequency analysis and computation of mean satisfaction score[96].

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[95] The item 'relationship with husband' addresses the respondent's own marriage.

[96] For the planned further analysis (i.e. factorial analysis, the results of which are presented in Chapter 7, despite the significant proportion of non-responses (particularly regarding the questions related to children and marriages), it is important that these items be retained. It is also necessary to maintain the size of each of the

6.3 RESULTS OF FREQUENCY ANALYSIS

The presentation of results starts with some descriptive statistics of the characteristics of the sample respondents and their households in two sites.

Findings from the analysis of the BGA scale data for the two sites (Sylhet and Dhaka) are then presented. The data from the two sites is first analysed separately, to ascertain the patterns of goal priorities and of goal attainment within each site. The main aim of the first stage of analysis is to screen the data and assess the content validity and face validity of the BGA instrument. This is done through examining the frequency distribution of responses to the goal satisfaction and goal importance scales in the two sites, augmented with the means of satisfaction and necessity ratings for each goal. For instance, the absence of missing values would suggest that the items are relevant and comprehensible to the target respondents. Variation in satisfaction response patterns for the different items would indicate that they are able to discriminate between respondents with low and high levels of satisfaction. While variation in necessity response patterns would suggest that the measure is able to capture differences in goal priorities.

In addition, I examine the satisfaction of goal items in relation to their perceived necessity, within each site, by comparing the rankings of mean satisfaction and mean necessity scores. The two sites are then compared in terms of goal necessity and goal satisfaction using the rankings of the mean goal necessity and mean goal satisfaction scores. This enables us to identify goals which are relatively more important, and relatively more satisfied in one site compared to the other. Lastly, I discuss the approach of computing necessity weighted satisfaction scores with a view to assessing whether necessity weighting of satisfaction scores improves the measurement of perceived QoL, beyond that of only using satisfaction scores.

6.3.1 CHARACTERISTICS OF STUDY RESPONDENTS AND THEIR HOUSEHOLDS IN THE TWO SITES

In the previous chapter I described the two study sites in terms of their location and service provision. Table 14 reports shows some descriptive statistics of the women constituting the samples in Dhaka and Sylhet, this gives further insight into the circumstances of the women

samples to meet the requirements of the planned analysis; this means that excluding the cases with missing responses should also be avoided

in these two sites and may aid in understanding the patterns of goal importance and goal satisfaction.

The educational attainment of respondents was greater in Sylhet. Almost two thirds (63.7%) of respondents in Dhaka reported that they had not received any formal schooling, compared to 44% in Sylhet. Educational attainment of the household head was also recorded as it is considered to be an indicator of socio-economic status. In Dhaka, a greater proportion of household heads had received some education (67.9%), compared to 41.2% in Sylhet. It should be noted that the household head in Sylhet, where more respondents were residing in extended family arrangements, is more likely to be the respondent's father-in-law or an older brother-in law, rather than their spouse, which might mean that education levels will be lower since the head will be older. However, the proportion of household heads receiving more than 5 years of formal education was greater in Sylhet.

Table 14 Characteristics of respondents

	Dhaka n=394		Sylhete n=399	
Age of respondent				
< 25 years	127	32.2%	82	20.6%
25-39 years	188	47.7%	219	55.0%
>= 40 years	79	20.1%	97	24.4%
Educational attainment of respondent				
None	251	63.7%	175	44.0%
Primary or less	85	21.6%	120	30.2%
Above primary	58	14.7%	103	25.9%
Respondent employed or involved in income generating activity				
Yes	350	88.8%	15	3.8%
No	44	11.2%	383	96.2%
Respondent's no of children				
None		16.8%		11.6%
One to four		62.8%		62.4%
More than 5		21.4%		27.0%
Educational attainment of household head				
None	121	32.1%	234	58.8%
Primary or less	163	43.2%	49	12.3%
Above primary	93	24.7%	115	28.9%
Member of household sells manual labour > 100 days per year				
Yes	394	100.0%	101	25.80%
No	0	0.0%	291	74.20%
Number of household members				
1 to 4 members	235	59.4%	87	21.80%
5 to 8 members	150	38.8%	214	53.60%
More than 8	9	1.8%	98	24.60%

In Dhaka where the mean age of respondents was lower 16.8% of the respondents were childless, compared to 11.6% in Sylhet. The mean number of children was greater in Sylhet 3.50 (s.d. 1.85) compared to 2.84 (s.d. 2.02 in Dhaka. Similar proportions of women in both sites had between two and four children.

Only 3.8 % of the respondents in Sylhet reported that they were in employment or engaged in some form of income generation. Two women worked as health workers for a local NGO, a further two were teachers in the primary school. Several others reported that they produced handicrafts at home for sale in the local markets (these include handmade quilts, woven baskets etc.). In contrast, almost 90% of the women in Dhaka were working or involved in

income generation; the majority (more than half (57%)) were working as domestic maids[97], a further 12 % were engaged in some other form of daily manual labour (e.g. brick carrying or brick breaking for construction). Around 10% reported being in some form of salaried employment, predominantly as factory workers or as cleaners in offices or commercial buildings. Around another 10% were engaged in piece work within their homes. These were generally small-scale activities, such as making paper bags, which would not have made a significant impact on household earnings.

The average household size in terms of numbers of household members was greater in Sylhet (mean 6.94 (s.d. 3.35) and ranged from 2 to 25 members reflecting the greater proportion of residents residing in joint or extended family households. In Dhaka, the mean number of household members was 4.51 (s.d. 2.02) with range from 2 to 17 members.

The majority of households in Dhaka consisted of four or fewer members (59.4%); while the majority of households in Sylhet consisted of between five and eight members (53.6%). Less than 2 percent (1.8%) of the households in Dhaka had more than eight members; in Sylhet, almost a quarter (24.6%) of households had more than eight members.

Table 15 shows the proportion of households in each site considered to be in absolute poverty in terms of the non-fulfilment of basic needs[98]. Greater proportions of the Dhaka urban slum respondents were deficient in terms of five of the six dimensions (food, shelter, clothing, education and social participation). While it appears that the Sylhet rural respondents were more deficient in terms of health than the Dhaka respondents, the greater proportions of respondents in Sylhet reporting that a family member had been ill during the previous month may have arisen because Sylhet respondents would consider all members of an extended household whereas Dhaka respondents would only have considered members of the immediate nuclear family.

When all the different dimensions of absolute poverty were considered collectively (Table 16), 33.3% of the households in Sylhet are non-poor, double that of in Dhaka (16.2%). The percentage of households that were poor in three or more dimensions in Dhaka was almost four times that in Sylhet (30.3% and 7.3% respectively).

[97] The site was situated near several middle class residential area, which meant that work as domestic maids was plentiful.

[98] One item (of the four) for each of the dimensions (food, shelter, clothing, health, education and social participation) was taken from Bhuiya et al.'s (2007) Multi-dimensional Poverty Tool. This instrument was included in the survey to collect background information on the respondents. The instrument was discussed in the previous chapter (5.3.4).

Table 15 Respondent's households considered to be in absolute poverty in terms of the non-fulfillment of basic needs

Dimension	Dhaka n=394	Sylhete n=399
Food		
How frequently it so happened during the last 12 months that at least some household members could not have three (breakfast, lunch, dinner) meals (rice/ruti) a day due to		
Quite commonly (for or more days in a month)	56 14.2%	31 7.8%
Shelter		
Does this household own any shelter anywhere?		
No land, no house	123 31.2%	4 1.0%
Clothing		
Do all the members of the household have three or more sets of clothes?		
Less than half have	50 12.7%	33 8.3%
Education		
How common is the writing ability of the household members aged 10 years and above?		
None can write	99 25.1%	39 9.8%
Health		
How frequently do the household members on average suffer from illness or ill-health?		
Quite frequently (once or more a month)	170 43.1%	215 53.9%
Social particpation		
How intensely any member of the household participates in the samajik/community activities?		
Not active at all	245 62.3%	74 18.5%

Table 16 Extent of absolute poverty in the two sites

Absolute poverty	Dhaka n=394		Sylhete n=399	
Non-poor	64	16.2%	133	33.3%
Poor in 1 dimension	104	26.4%	182	45.6%
Poor in 2 dimension	106	26.9%	55	13.8%
Poor in 3 dimension	66	16.8%	22	5.5%
Poor in 4 dimension	40	10.2%	6	1.5%
Poor in 5 dimension	10	2.5%	1	0.3%
Poor in 6 dimension	3	0.8%		

6.3.2 GOAL NECESSITY IN DHAKA (URBAN SITE)

All respondents completed necessity scoring for all items (with the exceptions discussed in 6.2).

Table 17 reports the frequency distribution of necessity scores for each of the goals for the Dhaka sample.

There was no consensus regarding the perceived necessity of any goal item, i.e. the responses to the necessity ratings for each of the goals ranged from not at all necessary (1) to very necessary (5). The only exceptions were the ratings for being at peace and relationship with husband – two items that did not receive a single not at all necessary (1) rating. The variation in importance ratings suggests that the subsequent derivation of necessity weighted goal satisfaction scores (i.e. multiplying satisfaction ratings by importance ratings) will alter the distribution of scores, rather than inflating them all equally. The fact that respondents used the full range of response options also indicates that the response scales were understood by the respondents and had sufficient discriminative capacity.

Almost 90 percent (89.2%) of the items (66 of the 74 items) were rated as 'necessary' or 'very necessary' by more than 50% of the respondents. These figures suggest that the goal items included in the BGA scales are appropriate and relevant to this group of women, supporting the content and face validity of the BGA scales. Thirty-two items were rated as 'necessary' (=3) or 'very necessary' (=4) by more than 90% of respondents. There were also 15 items which more than 95% or more of the respondents had described as 'necessary 'or 'very necessary'. This group of items included the access and quality of services (NGO, government and health); the quality of various close relationships (relationship with husband, and family relationships) and other attributes of the family (health of the family members, family members being hard working, and the work skills of family members); health and basic needs such as housing and electricity; as well as the practice of religion and being at peace.

Around two thirds of the respondents described good relationship with husband, religion, and upbringing of children to be 'very necessary'. While the other items concerning children (children behaviour, children, and children's achievements) were described as 'very necessary' by around 60% of the respondents.

Lower proportions of respondents in the Dhaka site rated items concerned with involvement in the community activites were either 'necessary' or very 'necessary' e.g. just over one third (38.3%) of respondents in Dhaka felt that participation in the community' was either 'necessary' or 'very necessary'. Similarly, only around one fifth of Dhaka respondents regarded participation in community decisions (20.3%) and participation in community development (20.4%) as 'necessary' or 'very necessary'. In addition, almost half (45.7%) stated that having access to influential persons and 29.6% that having good leaders was also 'not at all necessary'.

Having their own vehicle was considered as ‘necessary’ or ‘very necessary’ by less than half of the sample respondents reflecting their lack of relevance to respondents residing in an urban setting. Respondents in the urban site as well as being poorer than their rural counterparts and so less likely to own a vehicle, are more reliant on rickshaws or other forms of public transport such as auto rickshaws or buses. In households where a member earns a living from plying a rickshaw, the rickshaws are commonly hired on a day by day basis.

As mentioned earlier, all the goal items, with the exception of being at peace and good relationship with husband, had been rated as ‘not at all necessary’ (= 1) by at least one respondent. For some items, particularly, such ratings are difficult to explain, e.g. the items health of yourself and health of family members was rated as ‘not at all necessary’ by one respondent. Such ratings may have arisen by the interviewer incorrectly completing the survey form, or even incorrect data-entry, or may reflect poor understanding on the part of the respondent. It is also possible that some respondents had interpreted the question regarding necessity as being confined to items that they lacked, or wished to attain *at this point in time* i.e. goal items which a respondent had attained, or which they were satisfied with, were deemed as ‘not necessary’ (at this point in time). On examining the raw data there are certain items that I would have expected all respondents to rate as necessary, such as ‘living in a safe locality’. However nearly ten percent of respondents (30 of 394) in fact rated this goal item as ‘not at all important’. Taking a closer look at how this subsample rated their satisfaction with the item ‘living in a safe locality’ reveals that the responses encompass the entire range of responses (from 1, not at all satisfied up to ‘5 ‘, very satisfied). In spite of these unexpected responses, a scan of the frequencies of responses for the necessity ratings of the different items, suggest that the patterns of response are consistent with what we would expect. That is, the incidences of respondents possibly interpreting the necessity question as referring to items that they wish to attain *at this point in time* is small, and that this will not have a detrimental effect on the results of the analysis (particularly the factor analysis).

An alternative way of considering the same data is in terms of the mean necessity rating for each item (Table 18). Mean necessity scores ranged from 1.6 up to 3.64 on the four- point scale. The five most important items in terms of their mean necessity rating are also items for which there is a great deal of consensus. The mean goal necessity scores of the two highest scoring items were for ‘practising religion’ and ‘relationship with husband, both 2.64 (s.d. 0.66 and 0.56 respectively, where the necessity scale ranges from ‘1’ to ‘4)’. The other items relate to children (i.e. children’s achievements and success, children’s upbringing, and children’s behaviour), all with mean necessity scores greater than 3.50.

Table 17 Dhaka (urban) goal necessity item response (74 items)

	Goal item necessity rating	1= not at all necessary	2= a little necessary	3=necessary	4= very necessary	Total
1	wAccessInformation	50 (12.7%)	52 (13.2%)	228 (57.9%)	64 (16.2%)	394
2	wAccessToInfluentials	180 (45.7%)	63 (16.0%)	113 (28.7%)	38 (9.6%)	394
3	wAssistingOthers	43 (10.9%)	144 (36.5%)	171 (43.4%)	36 (9.1%)	394
4	wBeingAtPeace	0 (0.0%)	10 (2.5%)	184 (46.7%)	200 (50.8%)	394
5	wBusiness	44 (11.2%)	17 (4.3%)	260 (66.0%)	73 (18.5%)	394
6	wCharacter	13 (3.3%)	31 (7.9%)	220 (55.8%)	130 (33.0%)	394
7	wChildren	28 (7.1%)	5 (1.3%)	121 (30.7%)	240 (60.9%)	394
8	wChildrenAchievements*	2 (0.7%	5 (1.8%	104 (36.49	174 (61%)	285
9	wChildrenBehaviour	6 (1.5%)	9 (2.3%)	135 (34.3%)	244 (61.9%)	394
10	wChildrenUpbringing*	2 0.7%	5 (1.3%)	87 (22.1%)	186 (47.2%)	280
11	wClothing	8 (2.0%)	28 (7.1%)	304 (77.2%)	54 (13.7%)	394
12	wCommunityAssistance	17 (4.3%)	49 (12.4%)	264 (67.0%)	64 (16.2%)	394
13	wCommunityDecisions	157 (39.8%)	157 (39.8%)	66 (16.8%)	14 (3.6%)	394
14	wCommunityDevelopment	253 (64.2%)	61 (15.5%)	64 (16.2%)	16 (4.1%)	394
15	wCommunityFestivals	42 (10.7%)	194 (49.2%)	144 (36.5%)	14 (3.6%)	394
16	wCommunityOrganisations	103 (26.1%)	205 (52.0%)	77 (19.5%)	9 (2.3%)	394
17	wConvenienceGoods	25 (6.3%)	80 (20.3%)	233 (59.1%)	56 (14.2%)	394
18	wCookingFacilities	10 (2.5%)	19 (4.8%)	245 (62.2%)	120 (30.5%)	394
19	wEducationalInstitutes	2 (0.5%)	8 (2.0%)	224 (56.9%)	160 (40.6%)	394
20	wEducationfamily	10 (2.5%)	22 (5.6%)	163 (41.4%)	199 (50.5%)	394
21	wEducationSelf	34 (8.6%)	45 (11.4%)	122 (31.0%)	193 (49.0%)	394
22	wElectricity	2 (0.5%)	12 (3.0%)	237 (60.2%)	143 (36.3%)	394
23	wEquipment	75 (19.0%)	25 (6.3%)	227 (57.6%)	67 (17.0%)	394
24	wFamilyHardworking	3 (0.8%)	10 (2.5%)	208 (52.8%)	173 (43.9%)	394
25	wFamilyObligations	1 (0.3%)	18 (4.6%)	241 (61.2%)	134 (34.0%)	394
26	wFamilyRelations	3 (0.8%)	11 (2.8%)	219 (55.6%)	161 (40.9%)	394
27	wFamilyReputation	1 (0.3%)	124 (31.5%)	198 (50.3%)	71 (18.0%)	394
28	wFamilyRespect	4 (1.0%)	120 (30.5%)	207 (52.5%)	63 (16.0%)	394
29	wFamilySkills	2 (0.5%)	16 (4.1%)	196 (49.7%)	180 (45.7%)	394
30	wFood	5 (1.3%)	18 (4.6%)	289 (73.4%)	82 (20.8%)	394
31	wFoodProduction	15 (3.8%)	167 (42.4%)	142 (36.0%)	70 (17.8%)	394
32	wFriendships	41 (10.4%)	58 (14.7%)	249 (63.2%)	46 (11.7%)	394
33	wHealthFamilyMembers	1 (0.3%)	13 (3.3%)	186 (47.2%)	194 (49.2%)	394
34	wHealthSelf	1 (0.3%)	14 (3.6%)	178 (45.2%)	201 (51.0%)	394
35	wHouseholdGoods	5 (1.3%)	43 (10.9%)	263 (66.8%)	83 (21.1%)	394
36	wHouseOwnership	1 (0.3%)	23 (5.8%)	157 (39.8%)	213 (54.1%)	394
37	wHousing	3 (0.8%)	10 (2.5%)	234 (59.4%)	147 (37.3%)	394
38	wIncomeHousehold	11 (2.8%)	15 (3.8%)	138 (35.0%)	230 (58.4%)	394
39	wIncomePersonal	26 (6.6%)	22 (5.6%)	217 (55.1%)	129 (32.7%)	394
40	wInLawsDecisions	32 (8.1%)	66 (16.8%)	208 (52.8%)	88 (22.3%)	394
41	wInLawsRespect	16 (4.1%)	28 (7.1%)	256 (65.0%)	94 (23.9%)	394
42	wInLawsSupportHelp	28 (7.1%)	28 (7.1%)	243 (61.7%)	95 (24.1%)	394
43	wKnowledgeAndSkills	49 (12.4%)	38 (9.6%)	221 (56.1%)	86 (21.8%)	394
44	wLandHoldings	6 (1.5%)	21 (5.3%)	194 (49.2%)	173 (43.9%)	394
45	wLeaders	116 (29.4%)	56 (14.2%)	160 (40.6%)	62 (15.7%)	394
46	wLivestock	67 (17.0%)	159 (40.4%)	122 (31.0%)	46 (11.7%)	394
47	wLoans	82 (20.8%)	27 (6.9%)	224 (56.9%)	61 (15.5%)	394
48	wLocalityClean	7 (1.8%)	48 (12.2%)	251 (63.7%)	88 (22.3%)	394
49	wLocalitySafe	30 (7.6%)	25 (6.3%)	210 (53.3%)	129 (32.7%)	394
50	wMarkets	5 (1.3%)	59 (15.0%)	240 (60.9%)	90 (22.8%)	394
51	wMarriages*	1 (1.1%)	2 (2.1%)	50 (52.6%)	42 (44.2%)	95
52	wNeighbourhoodRelations	10 (2.5%)	55 (14.0%)	247 (62.7%)	82 (20.8%)	394
53	wOccupationalSuccess	28 (7.1%)	22 (5.6%)	226 (57.4%)	118 (29.9%)	394
54	wPersonalRespect	8 (2.0%)	64 (16.2%)	264 (67.0%)	58 (14.7%)	394
55	wPersonalWealth	11 (2.8%)	49 (12.4%)	229 (58.1%)	105 (26.6%)	394
56	wPhone	46 (11.7%)	39 (9.9%)	153 (38.8%)	156 (39.6%)	394
57	wPhysicalAppearance	18 (4.6%)	57 (14.5%)	217 (55.1%)	102 (25.9%)	394
58	wRecreation	11 (2.8%)	103 (26.1%)	234 (59.4%)	46 (11.7%)	394
59	wRelationsHusband*	0 (0%)	9 (2.3%)	125 (31.8%)	259 (65.9%)	393
60	wRelationsNatal	10 (2.5%)	17 (4.3%)	212 (53.8%)	155 (39.3%)	394
61	wReligion	1 (0.3%)	15 (3.8%)	108 (27.4%)	270 (68.5%)	394
62	wRest	12 (3.0%)	66 (16.8%)	248 (62.9%)	68 (17.3%)	394
63	wRoadsAndTransport	1 (0.3%)	35 (8.9%)	260 (66.0%)	98 (24.9%)	394
64	wSafeWater	11 (2.8%)	17 (4.3%)	191 (48.5%)	175 (44.4%)	394
65	wSalariedJob	53 (13.5%)	16 (4.1%)	214 (54.3%)	111 (28.2%)	394
66	wSavingsHousehold	2 (0.5%)	26 (6.6%)	149 (37.8%)	217 (55.1%)	394
67	wSavingsPersonal	9 (2.3%)	37 (9.4%)	154 (39.1%)	194 (49.2%)	394
68	wSelfEmployment	32 (8.1%)	100 (25.4%)	143 (36.3%)	119 (30.2%)	394
69	wServicesGovt	3 (0.8%)	10 (2.5%)	189 (48.0%)	192 (48.7%)	394
70	wServicesHealth	1 (0.3%)	4 (1.0%)	202 (51.3%)	187 (47.5%)	394
71	wServicesNGO	4 (1.0%)	10 (2.5%)	203 (51.5%)	177 (44.9%)	394
72	wToilet	11 (2.8%)	18 (4.6%)	232 (58.9%)	133 (33.8%)	394
73	wTrustworthyFriend	12 (3.0%)	46 (11.7%)	257 (65.2%)	79 (20.1%)	394
74	wVehicle	231 (58.6%)	48 (12.2%)	78 (19.8%)	37 (9.4%)	394

Table 18 Dhaka (urban) mean goal necessity ratings

	Goal item	N	Minimum	Maximum	Mean	Std. Deviation
1	wwReligion	394	1	4	3.64	0.57
2	wwRelationsHusband	393	2	4	3.64	0.53
3	wwChildrenUpbringing	280	1	4	3.63	0.56
4	wwChildrenAchievements	285	1	4	3.58	0.57
5	wwIncomeHousehold	394	1	4	3.49	0.70
6	wwBeingAtPeace	394	2	4	3.48	0.55
7	wwHouseOwnership	394	1	4	3.48	0.62
8	wwSavingsHousehold	394	1	4	3.47	0.64
9	wwHealthSelf	394	1	4	3.47	0.58
10	wwChildrenBehaviour	309	1	4	3.46	0.65
11	wwServicesHealth	394	1	4	3.46	0.53
12	wwHealthFamilyMembers	394	1	4	3.45	0.57
13	wwChildren	394	1	4	3.45	0.84
14	wwServicesGovt	394	1	4	3.45	0.59
15	wwFamilySkills	394	1	4	3.41	0.59
16	wwServicesNGO	394	1	4	3.40	0.59
17	wwMarriages	95	1	4	3.40	0.59
18	wwFamilyHardworking	394	1	4	3.40	0.58
19	wwEducationfamily	394	1	4	3.40	0.71
20	wwEducationalInstitutes	394	1	4	3.38	0.55
21	wwFamilyRelations	394	1	4	3.37	0.58
22	wwLandHoldings	394	1	4	3.36	0.65
23	wwSavingsPersonal	394	1	4	3.35	0.74
24	wwSafeWater	394	1	4	3.35	0.69
25	wwHousing	394	1	4	3.33	0.56
26	wwElectricity	394	1	4	3.32	0.56
27	wwRelationsNatal	394	1	4	3.30	0.67
28	wwFamilyObligations	394	1	4	3.29	0.56
29	wwToilet	394	1	4	3.24	0.66
30	wwCookingFacilities	394	1	4	3.21	0.64
31	wwEducationSelf	394	1	4	3.20	0.95
32	wwCharacter	394	1	4	3.19	0.71
33	wwRoadsAndTransport	394	1	4	3.15	0.57
34	wwncomePersonal	394	1	4	3.14	0.79
35	wwFood	394	1	4	3.14	0.54
36	wwLocalitySafe	394	1	4	3.11	0.83
37	wwOccupationalSuccess	394	1	4	3.10	0.79
38	wIwnLawsRespect	394	1	4	3.09	0.68
39	wwPersonalWealth	394	1	4	3.09	0.70
40	wwHouseholdGoods	394	1	4	3.08	0.60
41	wwLocalityClean	394	1	4	3.07	0.64
42	wwPhone	394	1	4	3.06	0.98
43	wwMarkets	394	1	4	3.05	0.65
44	wwInLawsSupportHelp	394	1	4	3.03	0.77
45	wwClothing	394	1	4	3.03	0.54
46	wwTrustworthyFriend	394	1	4	3.02	0.66
47	wwPhysicalAppearance	394	1	4	3.02	0.77
48	wwNeighbourhoodRelations	394	1	4	3.02	0.67
49	wwSalariedJob	394	1	4	2.97	0.93
50	wwCommunityAssistance	394	1	4	2.95	0.68
51	wwPersonalRespect	394	1	4	2.94	0.62
52	wwRest	394	1	4	2.94	0.68
53	wwBusiness	394	1	4	2.92	0.82
54	wwInLawsDecisions	394	1	4	2.89	0.84
55	wwSelfEmployment	394	1	4	2.89	0.93
56	wwKnowledgeAndSkills	394	1	4	2.87	0.89
57	wwFamilyReputation	394	1	4	2.86	0.70
58	wwFamilyRespect	394	1	4	2.84	0.69
59	wwConvenienceGoods	394	1	4	2.81	0.75
60	wwRecreation	394	1	4	2.80	0.67
61	wwAccessInformation	394	1	4	2.78	0.87
62	wwFriendships	394	1	4	2.76	0.79
63	wwEquipment	394	1	4	2.73	0.96
64	wwFoodProduction	394	1	4	2.68	0.81
65	wwLoans	394	1	4	2.67	0.97
66	wwAssistingOthers	394	1	4	2.51	0.81
67	wwLeaders	394	1	4	2.43	1.07
68	wwLivestock*	394	1	4	2.37	0.90
69	wwCommunityFestivals*	394	1	4	2.33	0.71
70	wwAccessToInfluentials*	394	1	4	2.02	1.06
71	wwCommunityOrganisations*	394	1	4	1.98	0.74
72	wwCommunityDecisions*	394	1	4	1.84	0.83
73	wwVehicle*	394	1	4	1.80	1.06
74	wwCommunityDevelopment*	394	1	4	1.60	0.90

>=90% of respondents rated item as 'necessary 'or' very necessary'

* <50% of respondents rated item as 'necessary 'or' very necessary'

GOAL SATISFACTION IN DHAKA (URBAN SITE)

Table 19 provides frequency distributions for the 74 goal satisfaction items for the Dhaka sample.

For 73 of the 74 goal items, *fewer* than half of the respondents rated their satisfaction as 'completely satisfied' (=5) or 'mostly satisfied' (=4), the only exception was relationship with husband (56.1%). The high proportion of respondents expressing dissatisfaction with all of these items also supports the content validity of the BGA instrument. On the other hand, items for which the greatest numbers of respondents stated that they were either 'completely satisfied' or 'mostly satisfied' were those involving close relationships and children., e.g. in the case of 'family relationships', 44.7% stated that they were 'mostly satisfied' or 'completely satisfied'.

The greatest dissatisfaction was with the items involving participation in the community Around 90% of the respondents stated that they were 'not at all satisfied' (=1) regarding participation in community organisations (88.8%), participation in community decisions (91.6%) and participation in the development of the community (91.4%) More than three quarters expressed that they were not at all satisfied with access to influential persons (78.4%). Other items for which there was a great deal of dissatisfaction were the ownership of vehicles (90.7%), livestock, (94.9%) and own business (85.5%). Not a single respondent had rated their satisfaction as 'completely satisfied' for the items access to influential and participation in community services. Mean satisfaction can be seen in Table 20 in the next section, and these ranged from 1.13 up to 3.7 on the 1 to 5-point scale.

Table 19 Dhaka (urban) goal satisfaction item response (74 items)

	Goal item satisfaction rating	1= not at all	2= a little	3= moderately	4= mostly	5= completely	Total
1	AccessInformation	130 (33.0%)	109 (27.7%)	139 (35.3%)	16 (4.1%)	0 (0.0%)	394
2	AccessToInfluentials	309 (78.4%)	37 (9.4%)	41 (10.4%)	6 (1.5%)	1 (0.3%)	394
3	AssistingOthers	137 (34.8%)	89 (22.6%)	145 (36.8%)	16 (4.1%)	7 (1.8%)	394
4	BeingAtPeace	38 (9.6%)	57 (14.5%)	202 (51.3%)	76 (19.3%)	21 (5.3%)	394
5	Business	337 (85.5%)	10 (2.5%)	23 (5.8%)	12 (3.0%)	12 (3.0%)	394
6	Character	7 (1.8%)	63 (16.0%)	218 (55.3%)	62 (15.7%)	44 (11.2%	394
7	Children	82 (20.8%)	7 (1.8%)	123 (31.2%)	71 (18.0%)	111 (28.2%	394
8	ChildrenAchievements	20 (7.0%)	62 (21.6%)	132 (46.0%)	35 (12.2%)	38 (13.2%	287*
9	ChildrenBehaviour	7 (2.3%)	15 (4.9%)	134 (43.4%)	62 (20.1%)	91 (29.4%	309*
10	ChildrenUpbringing	39 (13.9%)	64 (22.9%)	116 (41.4%)	31 (11.1%)	30 (10.7%	280*
11	Clothing	33 (8.4%)	111 (28.2%)	193 (49.0%)	39 (9.9%)	18 (4.6%)	394
12	CommunityAssistance	149 (37.8%)	89 (22.6%)	138 (35.0%)	12 (3.0%)	6 (1.5%)	394
13	CommunityDecisions	361 (91.6%)	13 (3.3%)	16 (4.1%)	4 (1.0%)	0 (0.0%)	394
14	CommunityDevelopment	360 (91.4%)	13 (3.3%)	18 (4.6%)	2 (0.5%)	1 (0.3%)	394
15	CommunityFestivals	53 (13.5%)	258 (65.5%)	70 (17.8%)	11 (2.8%)	2 (0.5%)	394
16	CommunityOrganisations	350 (88.8%)	22 (5.6%)	16 (4.1%)	5 (1.3%)	1 (0.3%)	394
17	ConvenienceGoods	247 (62.7%)	53 (13.5%)	70 (17.8%)	18 (4.6%)	6 (1.5%)	394
18	CookingFacilities	71 (18.0%)	88 (22.3%)	181 (45.9%)	36 (9.1%)	18 (4.6%)	394
19	EducationalInstitutes	41 (10.4%)	84 (21.3%)	222 (56.3%)	38 (9.6%)	9 (2.3%)	394
20	Educationfamily	150 (38.1%)	99 (25.1%)	92 (23.4%)	31 (7.9%)	22 (5.6%)	394
21	EducationSelf	229 (58.1%)	72 (18.3%)	68 (17.3%)	17 (4.3%)	8 (2.0%)	394
22	Electricity	62 (15.7%)	72 (18.3%)	216 (54.8%)	36 (9.1%)	8 (2.0%)	394
23	Equipment	352 (89.3%)	10 (2.5%)	20 (5.1%)	5 (1.3%)	7 (1.8%)	394
24	FamilyHardworking	34 (8.6%)	58 (14.7%)	225 (57.1%)	56 (14.2%)	21 (5.3%)	394
25	FamilyObligations	19 (4.8%)	37 (9.4%)	205 (52.0%)	109 (27.7%)	24 (6.1%)	394
26	FamilyRelations	22 (5.6%)	35 (8.9%)	161 (40.9%)	118 (29.9%)	58 (14.7%	394
27	FamilyReputation	32 (8.1%)	107 (27.2%)	183 (46.4%)	41 (10.4%)	31 (7.9%)	394
28	FamilyRespect	87 (22.1%)	59 (15.0%)	172 (43.7%)	42 (10.7%)	34 (8.6%)	394
29	FamilyWorkSkills	35 (8.9%)	82 (20.8%)	213 (54.1%)	42 (10.7%)	22 (5.6%)	394
30	Food	26 (6.6%)	120 (30.5%)	182 (46.2%)	50 (12.7%)	16 (4.1%)	394
31	FoodProduction	287 (72.8%)	53 (13.5%)	40 (10.2%)	10 (2.5%)	4 (1.0%)	394
32	Friendships	135 (34.3%)	85 (21.6%)	136 (34.5%)	32 (8.1%)	6 (1.5%)	394
33	HealthFamilyMembers	19 (4.8%)	105 (26.6%)	206 (52.3%)	53 (13.5%)	11 (2.8%)	394
34	HealthSelf	39 (9.9%)	114 (28.9%)	176 (44.7%)	50 (12.7%)	15 (3.8%)	394
35	HouseholdGoods	95 (24.1%)	120 (30.5%)	135 (34.3%)	32 (8.1%)	12 (3.0%)	394
36	HouseOwnership	207 (52.5%)	88 (22.3%)	70 (17.8%)	21 (5.3%)	8 (2.0%)	394
37	Housing	53 (13.5%)	107 (27.2%)	174 (44.2%)	46 (11.7%)	14 (3.6%)	394
38	IncomeHousehold	46 (11.7%)	148 (37.6%)	138 (35.0%)	44 (11.2%)	18 (4.6%)	394
39	IncomePersonal	225 (57.1%)	78 (19.8%)	69 (17.5%)	13 (3.3%)	9 (2.3%)	394
40	InLawsDecisions	126 (32.0%)	68 (17.3%)	123 (31.2%)	54 (13.7%)	23 (5.8%)	394
41	InLawsRespect	88 (22.3%)	50 (12.7%)	164 (41.6%)	64 (16.2%)	28 (7.1%)	394
42	InLawsSupportHelp	117 (29.7%)	52 (13.2%)	138 (35.0%)	66 (16.8%)	21 (5.3%)	394
43	KnowledgeAndSkills	126 (32.0%)	96 (24.4%)	157 (39.8%)	14 (3.6%)	1 (0.3%)	394
44	LandHoldings	181 (45.9%)	85 (21.6%)	91 (23.1%)	28 (7.1%)	9 (2.3%)	394
45	Leaders	260 (66.0%)	37 (9.4%)	87 (22.1%)	8 (2.0%)	2 (0.5%)	394
46	Livestock	374 (94.9%)	3 (0.8%)	9 (2.3%)	2 (0.5%)	6 (1.5%)	394
47	Loans	209 (53.0%)	56 (14.2%)	100 (25.4%)	19 (4.8%)	10 (2.5%)	394
48	LocalityClean	31 (7.9%)	130 (33.0%)	182 (46.2%)	42 (10.7%)	9 (2.3%)	394
49	LocalitySafe	10 (2.5%)	32 (8.1%)	216 (54.8%)	83 (21.1%)	53 (13.5%	394
50	Markets	14 (3.6%)	52 (13.2%)	240 (60.9%)	54 (13.7%)	34 (8.6%)	394
51	Marriages	12 (12.6%)	11 (11.6%)	48 (50.5%)	16 (16.8%)	8 (8.4%)	95*
52	NeighbourhoodRelations	41 (10.4%)	44 (11.2%)	215 (54.6%)	73 (18.5%)	21 (5.3%)	394
53	OccupationalSuccess	239 (60.7%)	74 (18.8%)	59 (15.0%)	12 (3.0%)	10 (2.5%)	394
54	PersonalRespect	93 (23.6%)	54 (13.7%)	166 (42.1%)	44 (11.2%)	37 (9.4%)	394
55	PersonalWealth	294 (74.6%)	56 (14.2%)	36 (9.1%)	6 (1.5%)	2 (0.5%)	394
56	Phone	262 (66.5%)	38 (9.6%)	43 (10.9%)	32 (8.1%)	19 (4.8%)	394
57	PhysicalAppearance	50 (12.7%)	89 (22.6%)	179 (45.4%)	69 (17.5%)	7 (1.8%)	394
58	Recreation	116 (29.4%)	116 (29.4%)	121 (30.7%)	23 (5.8%)	18 (4.6%)	394
59	RelationsHusband	47 (11.9%)	37 (9.4%)	89 (22.6%)	127 (32.2%)	94 (23.9%	394
60	RelationsNatal	49 (12.4%)	33 (8.4%)	139 (35.3%)	109 (27.7%)	64 (16.2%	394
61	Religion	97 (24.6%)	139 (35.3%)	103 (26.1%)	43 (10.9%)	12 (3.0%)	394
62	Rest	74 (18.8%)	117 (29.7%)	139 (35.3%)	38 (9.6%)	26 (6.6%)	394
63	RoadsAndTransport	39 (9.9%)	72 (18.3%)	242 (61.4%)	36 (9.1%)	5 (1.3%)	394
64	SafeWater	60 (15.2%)	58 (14.7%)	189 (48.0%)	53 (13.5%)	34 (8.6%)	394
65	SalariedJob	271 (68.8%)	27 (6.9%)	56 (14.2%)	16 (4.1%)	24 (6.1%)	394
66	SavingsHousehold	209 (53.0%)	116 (29.4%)	48 (12.2%)	17 (4.3%)	4 (1.0%)	394
67	SavingsPersonal	263 (66.8%)	74 (18.8%)	43 (10.9%)	10 (2.5%)	4 (1.0%)	394
68	SelfEmployment	186 (47.2%)	51 (12.9%)	94 (23.9%)	41 (10.4%)	22 (5.6%)	394
69	ServicesGovt	238 (60.4%)	71 (18.0%)	57 (14.5%)	28 (7.1%)	0 (0.0%)	394
70	ServicesHealth	62 (15.8%)	98 (24.9%)	196 (49.9%)	32 (8.1%)	5 (1.3%)	393
71	ServicesNGO	211 (53.6%)	86 (21.8%)	73 (18.5%)	23 (5.8%)	1 (0.3%)	394
72	Toilet	58 (14.7%)	59 (15.0%)	216 (54.8%)	43 (10.9%)	18 (4.6%)	394
73	TrustworthyFriend	134 (34.0%)	68 (17.3%)	40 (10.2%)	137 (34.8%)	15 (3.8%)	394
74	Vehicle	357 (90.6%)	8 (2.0%)	19 (4.8%)	6 (1.5%)	4 (1.0%)	394

6.3.4 COMPARING GOAL NECESSITY AND GOAL SATISFACTION IN DHAKA (URBAN).

In this section the satisfaction of goal items in relation to their perceived necessity in the urban site is considered. Mean scores for the goal necessity and goal satisfaction scales for the urban (Dhaka) sample are shown in Table 20. There is a reasonably strong correlation between the mean necessity and mean satisfaction scores (the correlation coefficient is.612).

There are several possible explanations to explain this strong correlation. If an item is considered more necessary, it would be reasonable to expect that respondents will expend more effort and time in achieving it. Another possible explanation is that of adaptation. When respondents are unable to satisfy a particular goal item, it may result in them adjusting and reducing the perceived necessity of that goal item. The size of the correlation may also suggest that subjective evaluations of satisfaction already include a component of subjective importance (e.g. Trauer and Mackinnon, 2001), making weighting of satisfaction scores redundant.

The last column of Table 20 shows the difference in necessity and satisfaction ranking of each item (i.e. the rank differential (X-Y), and enables us to identify items where necessity and satisfaction rank differ most. The magnitude of the rank differential (X-Y) ranges from -51 to +39. Item that have low satisfaction rankings relative to their perceived necessity (so that X-Y is negative) are referred to as ‘shortfall goals’. Conversely, items for which satisfaction rankings are high in relation to their perceived necessity ranking are referred to as ‘success goals’. Considering the rank differential alone can be misleading, for instance an item with a large negative rank difference is personal wealth (-27) making it a shortfall goal. However personal wealth itself is ranked 39th out of the 74 items in terms of necessity, making it a less important goal which is poorly satisfied. When considering perceived goal attainment, it is more appropriate to consider the goals which are considered to be highly necessary (prioritised goals) and examine to what extent these are satisfied.

Table 20 Dhaka (urban) comparison of goal necessity and goal satisfaction

	Goal item	N	Necessity		Satisfaction		(X-Y)
			Mean	Rank (X)	Mean	Rank (Y)	
1	wwReligion	394	3.64	1	2.32	41	-40
2	wwRelationsHusband	393	3.64	2	3.47	2	0
3	wwChildrenUpbringing	280	3.63	3	2.82	19	-16
4	wwChildrenAchievements	285	3.58	4	3.03	10	-6
5	wwIncomeHousehold	394	3.49	5	2.59	34	-29
6	wwBeingAtPeace	394	3.48	6	2.96	13	-7
7	wwHouseOwnership	394	3.48	7	1.82	53	-46
8	wwSavingsHousehold	394	3.47	8	1.71	59	-51
9	wwHealthSelf	394	3.47	9	2.72	26	-17
10	wwChildrenBehaviour	309	3.46	10	3.70	1	9
11	wwServicesHealth	394	3.46	11	2.54	38	-27
12	wwHealthFamilyMembers	394	3.45	12	2.83	16	-4
13	wwChildren	394	3.45	13	3.31	5	8
14	wwServicesGovt	394	3.45	14	1.68	61	-47
15	wwFamilySkills	394	3.41	15	2.83	17	-2
16	wwServicesNGO	394	3.40	16	1.77	54	-38
17	wwMarriages	95	3.40	17	2.97	11	6
18	wwFamilyHardworking	394	3.40	18	2.93	14	4
19	wwEducationfamily	394	3.40	19	2.18	44	-25
20	wwEducationalInstitutes	394	3.38	20	2.72	27	-7
21	wwFamilyRelations	394	3.37	21	3.39	3	18
22	wwLandHoldings	394	3.36	22	1.98	51	-29
23	wwSavingsPersonal	394	3.35	23	1.52	64	-41
24	wwSafeWater	394	3.35	24	2.86	15	9
25	wwHousing	394	3.33	25	2.65	31	-6
26	wwElectricity	394	3.32	26	2.63	32	-6
27	wwRelationsNatal	394	3.30	27	3.27	6	21
28	wwFamilyObligations	394	3.29	28	3.21	7	21
29	wwToilet	394	3.24	29	2.76	21	8
30	wwCookingFacilities	394	3.21	30	2.60	33	-3
31	wwEducationSelf	394	3.20	31	1.74	56	-25
32	wwCharacter	394	3.19	32	3.19	8	24
33	wwRoadsAndTransport	394	3.15	33	2.74	22	11
34	wwIncomePersonal	394	3.14	34	1.74	57	-23
35	wwFood	394	3.14	35	2.77	20	15
36	wwLocalitySafe	394	3.11	36	3.35	4	32
37	wwOccupationalSuccess	394	3.10	37	1.68	62	-25
38	wwInLawsRespect	394	3.09	38	2.73	24	14
39	wwPersonalWealth	394	3.09	39	1.39	66	-27
40	wwHouseholdGoods	394	3.08	40	2.36	40	0
41	wwLocalityClean	394	3.07	41	2.66	30	11
42	wwPhone	394	3.06	42	1.75	55	-13
43	wwMarkets	394	3.05	43	3.11	9	34
44	wwInLawsSupportHelp	394	3.03	44	2.55	37	7
45	wwClothing	394	3.03	45	2.74	23	22
46	wwTrustworthyFriend	394	3.02	46	2.57	35	11
47	wwPhysicalAppearance	394	3.02	47	2.73	25	22
48	wwNeighbourhoodRelations	394	3.02	48	2.97	12	36
49	wwSalariedJob	394	2.97	49	1.72	58	-9
50	wwCommunityAssistance	393	2.95	50	2.08	50	0
51	wwPersonalRespect	394	2.94	51	2.69	28	23
52	wwRest	394	2.94	52	2.56	36	16
53	wwBusiness	394	2.92	53	1.36	67	-14
54	wwInLawsDecisions	394	2.89	54	2.44	39	15
55	wwSelfEmployment	394	2.89	55	2.14	47	8
56	wwKnowledgeAndSkills	394	2.87	56	2.16	45	11
57	wwFamilyReputation	394	2.86	57	2.83	18	39
58	wwFamilyRespect	394	2.84	58	2.69	29	29
59	wwConvenienceGoods	394	2.81	59	1.69	60	-1
60	wwRecreation	394	2.80	60	2.27	42	18
61	wwAccessInformation	394	2.78	61	2.10	49	12
62	wwFriendships	394	2.76	62	2.21	43	19
63	wwEquipment	394	2.73	63	1.24	69	-6
64	wwFoodProduction	394	2.68	64	1.45	65	-1
65	wwLoans	394	2.67	65	1.90	52	13
66	wwAssistingOthers	394	2.51	66	2.15	46	20
67	wwLeaders	394	2.43	67	1.62	63	4
68	wwLivestock*	394	2.37	68	1.13	74	-6
69	wwCommunityFestivals*	394	2.33	69	2.11	48	21
70	wwAccessToInfluentials*	394	2.02	70	1.36	68	2
71	wwCommunityOrganisations*	394	1.98	71	1.19	71	0
72	wwCommunityDecisions*	394	1.84	72	1.14	73	-1
73	wwVehicle*	394	1.80	73	1.20	70	3
74	wwCommunityDevelopment*	394	1.60	74	1.15	72	2

Note: (X-Y) refers to the necessity ranking less the satisfaction ranking . Item necessity was rated on a four-point response scale (4 = very necessary, 3= necessary, 2 = a little necessary, 1 = not at all necessary). Goal satisfaction was rated on a five -point response scale (5 = completely satisfied, 4 = mostly satisfied,

Considering the 20 items with the highest mean necessity ratings as prioritised goals, we can identify items which are:

(1) highly necessary and (relatively) highly satisfied[99], i.e. prioritized success goals; and
(2) highly necessary and (relatively) poorly satisfied poorly i.e. prioritized shortfall goals,

Both are summarised in Table 21.

Table 21 Dhaka (urban) Prioritized success goals and prioritized shortfall goals [100]

	Goal item	N	Necessity		Satisfaction		(X-Y)
			Mean	Rank (X)	Mean	Rank (Y)	
Prioritised Shortfall goals	wwSavingsHousehold	394	3.47	8	1.71	59	-51
	wwServicesGovt	394	3.45	14	1.68	61	-47
	wwHouseOwnership	394	3.48	7	1.82	53	-46
	wwReligion	394	3.64	1	2.32	41	-40
	wwServicesNGO	394	3.40	16	1.77	54	-38
	wwIncomeHousehold	394	3.49	5	2.59	34	-29
	wwServicesHealth	394	3.46	11	2.54	38	-27
	wwEducationfamily	394	3.40	19	2.18	44	-25
	wwHealthSelf	394	3.47	9	2.72	26	-17
	wwChildrenUpbringing	280	3.63	3	2.82	19	-16
Prioritised Success goals	wwBeingAtPeace	394	3.48	6	2.96	13	-7
	wwEducationalInstitutes	394	3.38	20	2.72	27	-7
	wwChildrenAchievements	285	3.58	4	3.03	10	-6
	wwHealthFamilyMembers	394	3.45	12	2.83	16	-4
	wwFamilySkills	394	3.41	15	2.83	17	-2
	wwRelationsHusband	394	3.64	2	3.47	2	0
	wwFamilyHardworking	394	3.40	18	2.93	14	4
	wwMarriages	95	3.40	17	2.97	11	6
	wwChildren	394	3.45	13	3.31	5	8
	wwChildrenBehaviour	309	3.46	10	3.70	1	9

Considering the 'prioritised shortfall items' where the rank differential is negative and exceeds 10 places, there are 10 items. Within this group there are also certain groups of related items.

Religion (-51) is the most highly necessary goal, for which satisfaction is very poor. Explanations for this can be found in the pretesting data and include dissatisfaction arising from having insufficient time to perform prayers, being unable to maintain ritual cleanliness required to perform the prayers, or simply not having been taught how to pray or being unable to recite the Quran. The response to this item question may also have been affected by social desirability bias; i.e. respondents would not have wanted to appear complacent about their level of religious practice.

[99] Even though these items are being described as satisfied to a high degree, it needs to be borne in mind that the highest mean necessity score for all items was 3.7 on the 1 to 5 point scale.

[100] An item which is highly satisfied in relation to its importance has a rank differential within +/- 10 places. An item which is poorly satisfied in relation to its importance has a negative value of X-Y exceeding 10 places.

The next significant group concern wealth and incomes of the household savings (-51), house ownership (-46), personal savings (-41), income household (-29).

Other shortfall items can be considered as being related to the capacity to earn i.e. education of family (-25), and health of self (-17). Another group of related items concerns service provision: government services (-47), NGO services (-38) and health services (-27). Both of these groups are far more important to urban respondents than rural respondents, and possible explanations for this will be discussed in section 6.4.1.

Within the shortfall prioritised goals also include the item children's upbringing (-16) *bachaderke manush kora* (literally make a human). This is widely understood as providing children with an education, which is contingent upon there being accessible schools and the household having the resources to enable children to attend school.

Similarly, considering 'prioritised success goals' i.e. where the rank differential with satisfaction was within 10 places, it is also possible to identify groups of related goals.

Other items concerning children were also prioritised, but were relatively well satisfied i.e. children (+8), children's behaviour (+9), and children's achievements (+10).

The item relationship with husband (0) is one which is very high in terms of necessity (mean necessity rating 3.64 (on the 1 to 4 scale) and relatively high in terms of satisfaction (3.47, 1 to 5 scale). This again indicates the centrality of women's identity as a wife, and the importance of this intimate relationship to their wellbeing. The high levels of satisfaction may also have arisen because of social desirability bias, women would be unwilling to disclose that they had a poor relationship with their husband as it reflects poorly on them and their personal status.

Items that are related to the capabilities of household members are also prioritised success goals items i.e. health family members (-4), family skills (-20) and family hardworking (+4). These are all items that are imperatives for the survival of a family in the urban context, Finally, being at peace (-7) is also an item which is prioritised and relatively well satisfied.

6.3.5 GOAL NECESSITY IN SYLHET (RURAL SITE)

Table 22 presents the distribution of necessity scores for each goal item in the Sylhet sample. All respondents completed necessity scoring for all items except for the items related to children and marriages, as in the Dhaka sample. In the Sylhet site *all* of the items were rated as either 'necessary' or 'very necessary' by more than 50% of the sample respondents, supporting content and face validity of the scale items. In contrast in Dhaka 66 of the 74 items were rates as 'necessary' or 'very necessary' by more than 50% of the respondent. At a first glance, this may suggest that the item pool may have greater content validity for the rural respondents. However, taking a closer look at the goal items included and necessity ratings, there are a small number of items which are clearly of lower relevance to the Dhaka respondents. These items are livestock, food production and own vehicle.

I compared the proportions of respondents in each site rating each item as 'very necessary'. I found that higher proportions of the Sylhet respondents had rated all the goal item as 'very necessary' (=4). The explanation for this finding may lie in adaptation. Respondents in the rural site are far better off socio-economically, and thus better placed to actually achieve all of the goals. As a result, the perceived necessity of goals is higher for the Sylhet respondents. Women in the urban site are far poorer and by implication may be less able to achieve a large number of the goals. In this scenario, the adaptation process results in a downward adjustment of the perceived necessity of goals, as evidenced by the lower mean necessity scores for each item.

There were three items which no-one rated as 'not necessary', i.e. children's achievements (excluding those respondents for whom it was marked 'not applicable'), education of family members, and health of self.

There were 7 items which were endorsed as 'necessary' or very necessary by more than 95% of the respondents in Sylhet. These were goals related to children (children's upbringing, children's achievements and children's behaviour), income of the household, marriages, family relations, own health and education of the family members.

The items that were the least necessary i.e. less than two thirds of the respondents rated as 'necessary' or very necessary' were loans, friendships, trustworthy friends, work success and salaried job, physical appearance and own vehicle. Several of these items are evidently more relevant to the urban women. Although the fact that 50-66% of rural respondents considered these items as necessary is evidence of their significant relevance to rural women.

Table 23 presents the mean goal necessity scores in rank order with the aspects of life considered most important in the Sylhet sample at the bottom of the chart. The mean necessity ratings range from 2.41 to 3. 86. The items which more than 90% of respondents

were rated as ‘necessary’ or ‘very necessary’, and all had mean necessity ratings exceeding 3.50.

Table 22 Sylhet (rural) goal necessity

	Goal item necessity rating	1= not at all necessary	2= a little necessary	3=necessary	4= very necessary	Total
1	wwAccessInformation	37 (9.3%)	73 (18.3%)	104 (26.1%)	185 (46.4%)	399
2	wwAccessToInfluentials	17 (4.3%)	74 (18.5%)	162 (40.6%)	146 (36.6%)	399
3	wwAssistingOthers	54 (13.5%)	80 (20.1%)	138 (34.6%)	127 (31.8%)	399
4	wwBeingAtPeace	2 (0.5%)	20 (5.0%)	45 (11.3%)	332 (83.2%)	399
5	wwBusiness	40 (10.0%)	30 (7.5%)	66 (16.5%)	263 (65.9%)	399
6	wwCharacter	4 (1.0%)	27 (6.8%)	69 (17.3%)	299 (74.9%)	399
7	wwChildren	19 (4.8%)	12 (3.0%)	35 (8.8%)	333 (83.5%)	399
8	wwChildrenAchievements	0 (0.0%)	5 (1.6%)	37 (11.7%)	274 (86.7%)	316*
9	wwChildrenBehaviour	5 (1.6%)	11 (3.5%)	35 (11.0%)	267 (84.0%)	318*
10	wwChildrenUpbringing	1 (0.3%)	7 (1.9%)	35 (9.4%)	328 (88.4%)	371*
11	wwClothing	3 (0.8%)	43 (10.8%)	91 (22.8%)	262 (65.7%)	399
12	wwCommunityAssistance	13 (3.3%)	50 (12.5%)	134 (33.6%)	202 (50.6%)	399
13	wwCommunityDecisions	25 (6.3%)	76 (19.0%)	140 (35.1%)	158 (39.6%)	399
14	wwCommunityDevelopmen	20 (5.0%)	70 (17.5%)	157 (39.3%)	152 (38.1%)	399
15	wwCommunityFestivals	27 (6.8%)	72 (18.0%)	146 (36.6%)	154 (38.6%)	399
16	wwCommunityOrganisatio	54 (13.5%)	76 (19.0%)	142 (35.6%)	127 (31.8%)	399
17	wwConvenienceGoods	49 (12.3%)	72 (18.0%)	141 (35.3%)	137 (34.3%)	399
18	wwEducationalInstitutes	3 (0.8%)	23 (5.8%)	72 (18.0%)	301 (75.4%)	399
19	wwEducationfamily	0 (0.0%)	11 (2.8%)	47 (11.8%)	341 (85.5%)	399
20	wwEducationSelf	23 (5.8%)	47 (11.8%)	103 (25.8%)	226 (56.6%)	399
21	wwElectricity	13 (3.3%)	26 (6.5%)	84 (21.1%)	276 (69.2%)	399
22	wwEquipment	55 (13.8%)	74 (18.5%)	146 (36.6%)	124 (31.1%)	399
23	wwFamilyHardworking	3 (0.8%)	31 (7.8%)	73 (18.3%)	292 (73.2%)	399
24	wwFamilyObligations	3 (0.8%)	21 (5.3%)	75 (18.8%)	300 (75.2%)	399
25	wwFamilyRelations	7 (1.8%)	12 (3.0%)	36 (9.0%)	344 (86.2%)	399
26	wwFamilyReputation	4 (1.0%)	59 (14.8%)	113 (28.3%)	223 (55.9%)	399
27	wwFamilyRespect	11 (2.8%)	54 (13.5%)	127 (31.8%)	207 (51.9%)	399
28	wwFamilySkills	9 (2.3%)	35 (8.8%)	88 (22.1%)	267 (66.9%)	399
29	wwFood	2 (0.5%)	26 (6.5%)	65 (16.3%)	306 (76.7%)	399
30	wwFoodProduction	23 (5.8%)	51 (12.8%)	117 (29.3%)	208 (52.1%)	399
31	wwFriendships	75 (18.8%)	108 (27.1%)	130 (32.6%)	86 (21.6%)	399
32	wwHealthFamilyMembers	5 (1.3%)	15 (3.8%)	74 (18.5%)	305 (76.4%)	399
33	wwHealthSelf	0 (0.0%)	17 (4.3%)	71 (17.8%)	311 (77.9%)	399
34	wwHouseholdGoods	8 (2.0%)	45 (11.3%)	131 (32.8%)	215 (53.9%)	399
35	wwHouseOwnership	6 (1.5%)	24 (6.0%)	66 (16.5%)	303 (75.9%)	399
36	wwHousing	3 (0.8%)	20 (5.0%)	61 (15.3%)	315 (78.9%)	399
37	wwIncomeHousehold	2 (0.5%)	9 (2.3%)	40 (10.0%)	348 (87.2%)	399
38	wIwncomePersonal	62 (15.5%)	37 (9.3%)	66 (16.5%)	234 (58.6%)	399
39	wwInLawsDecisions	17 (4.3%)	49 (12.3%)	124 (31.1%)	209 (52.4%)	399
40	wIwnLawsRespect	11 (2.8%)	45 (11.3%)	93 (23.3%)	250 (62.7%)	399
41	wwInLawsSupportHelp	12 (3.0%)	38 (9.5%)	117 (29.3%)	232 (58.1%)	399
42	wwKnowledgeAndSkills	35 (8.8%)	77 (19.3%)	118 (29.6%)	169 (42.4%)	399
43	wwLandHoldings	5 (1.3%)	18 (4.5%)	56 (14.0%)	320 (80.2%)	399
44	wwLeaders	12 (3.0%)	49 (12.3%)	105 (26.3%)	233 (58.4%)	399
45	wwLivestock	30 (7.5%)	78 (19.5%)	126 (31.6%)	165 (41.4%)	399
46	wwLoans	146 (36.6%)	52 (13.0%)	93 (23.3%)	108 (27.1%)	399
47	wwLocalityClean	2 (0.5%)	52 (13.0%)	90 (22.6%)	255 (63.9%)	399
48	wwLocalitySafe	12 (3.0%)	36 (9.0%)	74 (18.5%)	277 (69.4%)	399
49	wwMarkets	12 (3.0%)	50 (12.5%)	112 (28.1%)	225 (56.4%)	399
50	wwMarriages	2 (1.5%)	2 (1.5%)	11 (8.4%)	116 (88.5%)	131*
51	wwNeighbourhoodRelation	5 (1.3%)	56 (14.0%)	92 (23.1%)	246 (61.7%)	399
52	wwOccupationalSuccess	94 (23.6%)	57 (14.3%)	93 (23.3%)	155 (38.8%)	399
53	wwPersonalRespect	20 (5.0%)	48 (12.0%)	143 (35.8%)	188 (47.1%)	399
54	wwPersonalWealth	52 (13.0%)	65 (16.3%)	107 (26.8%)	175 (43.9%)	399
55	wwPhone	43 (10.8%)	54 (13.5%)	90 (22.6%)	212 (53.1%)	399
56	wwPhysicalAppearance	47 (11.8%)	93 (23.3%)	130 (32.6%)	129 (32.3%)	399
57	wwRecreation	21 (5.3%)	75 (18.8%)	188 (47.1%)	115 (28.8%)	399
58	wwRelationsHusband	12 (3.0%)	8 (2.0%)	14 (3.5%)	363 (91.4%)	397*
59	wwRelationsNatal	16 (4.0%)	39 (9.8%)	61 (15.3%)	283 (70.9%)	399
60	wwReligion	5 (1.3%)	26 (6.5%)	34 (8.5%)	334 (83.7%)	399
61	wwRest	14 (3.5%)	66 (16.5%)	169 (42.4%)	150 (37.6%)	399
62	wwRoadsAndTransport	19 (4.8%)	24 (6.0%)	91 (22.8%)	265 (66.4%)	399
63	wwSafeWater	18 (4.5%)	13 (3.3%)	48 (12.0%)	320 (80.2%)	399
64	wwSalariedJob	74 (18.5%)	68 (17.0%)	88 (22.1%)	169 (42.4%)	399
65	wwSavingsHousehold	7 (1.8%)	29 (7.3%)	56 (14.0%)	307 (76.9%)	399
66	wwSavingsPersonal	41 (10.3%)	61 (15.3%)	79 (19.8%)	218 (54.6%)	399
67	wwSelfEmployment	51 (12.8%)	60 (15.0%)	100 (25.1%)	188 (47.1%)	399
68	wwServicesGovt	9 (2.3%)	49 (12.3%)	91 (22.8%)	250 (62.7%)	399
69	wwServicesHealth	3 (0.8%)	34 (8.5%)	72 (18.0%)	290 (72.7%)	399
70	wwServicesNGO	60 (15.0%)	59 (14.8%)	105 (26.3%)	175 (43.9%)	399
71	wwToilet	15 (3.8%)	19 (4.8%)	70 (17.5%)	295 (73.9%)	399
72	wwTrustworthyFriend	73 (18.3%)	78 (19.5%)	121 (30.3%)	127 (31.8%)	399
73	wwVehicle	73 (18.3%)	64 (16.0%)	110 (27.6%)	152 (38.1%)	399

Table 23 Sylhet (rural) mean goal necessity ratings

	Goal item	N	Minimum	Maximum	Mean	Std. Deviation
1	wwChildrenUpbringing	371	1	4	3.86	0.42
2	wwChildrenAchievements	316	2	4	3.85	0.40
3	wwMarriages	131	1	4	3.84	0.51
4	wwIncomeHousehold	399	1	4	3.84	0.46
5	wwRelationsHusband	397	1	4	3.83	0.60
6	wwEducationfamily	399	2	4	3.83	0.45
7	wwFamilyRelations	399	1	4	3.80	0.57
8	wwChildrenBehaviour	318	1	4	3.77	0.58
9	wwBeingAtPeace	399	1	4	3.77	0.55
10	wwReligion	399	1	4	3.75	0.63
11	wwHealthSelf	399	2	4	3.74	0.53
12	wwLandHoldings	399	1	4	3.73	0.60
13	wwHousing	399	1	4	3.72	0.59
14	wwChildren	399	1	4	3.71	0.74
15	wwHealthFamilyMembers	399	1	4	3.70	0.60
16	wwFood	399	1	4	3.69	0.61
17	wwFamilyObligations	399	1	4	3.68	0.61
18	wwEducationalInstitutes	399	1	4	3.68	0.62
19	wwSafeWater	399	1	4	3.68	0.75
20	wwHouseOwnership	399	1	4	3.67	0.66
21	wwCharacter	399	1	4	3.66	0.65
22	wwSavingsHousehold	399	1	4	3.66	0.69
23	wwFamilyHardworking	399	1	4	3.64	0.66
24	wwServicesHealth	399	1	4	3.63	0.67
25	wwToilet	399	1	4	3.62	0.75
26	wwElectricity	399	1	4	3.56	0.76
27	wwLocalitySafe	399	1	4	3.54	0.78
28	wwFamilySkills	399	1	4	3.54	0.75
29	wwClothing	399	1	4	3.53	0.71
30	wwRelationsNatal	399	1	4	3.53	0.83
31	wwRoadsAndTransport	399	1	4	3.51	0.81
32	wwLocalityClean	399	1	4	3.50	0.74
33	wwServicesGovt	399	1	4	3.46	0.79
34	wlwnLawsRespect	399	1	4	3.46	0.80
35	wwNeighbourhoodRelations	399	1	4	3.45	0.78
36	wwInLawsSupportHelp	399	1	4	3.43	0.79
37	wwLeaders	399	1	4	3.40	0.82
38	wwFamilyReputation	399	1	4	3.39	0.77
39	wwHouseholdGoods	399	1	4	3.39	0.76
40	wwBusiness	399	1	4	3.38	1.00
41	wwMarkets	399	1	4	3.38	0.82
42	wwEducationSelf	399	1	4	3.33	0.90
43	wwFamilyRespect	399	1	4	3.33	0.81
44	wwInLawsDecisions	399	1	4	3.32	0.85
45	wwCommunityAssistance	399	1	4	3.32	0.81
46	wwFoodProduction	399	1	4	3.28	0.90
47	wwPersonalRespect	399	1	4	3.25	0.85
48	wwSavingsPersonal	399	1	4	3.19	1.04
49	wlwncomePersonal	399	1	4	3.18	1.13
50	wwPhone	399	1	4	3.18	1.03
51	wwRest	399	1	4	3.14	0.81
52	wwCommunityDevelopment	399	1	4	3.11	0.86
53	wwAccessToInfluentials	399	1	4	3.10	0.85
54	wwAccessInformation	399	1	4	3.10	1.01
55	wwCommunityDecisions	399	1	4	3.08	0.91
56	wwCommunityFestivals	399	1	4	3.07	0.91
57	wwLivestock	399	1	4	3.07	0.95
58	wwSelfEmployment	399	1	4	3.07	1.06
59	wwKnowledgeAndSkills	399	1	4	3.06	0.98
60	wwPersonalWealth	399	1	4	3.02	1.06
61	wwRecreation	399	1	4	2.99	0.83
62	wwServicesNGO	399	1	4	2.99	1.09
63	wwConvenienceGoods	399	1	4	2.92	1.01
64	wwSalariedJob	399	1	4	2.88	1.15
65	wwCommunityOrganisations	399	1	4	2.86	1.02
66	wwVehicle	399	1	4	2.85	1.12
67	wwPhysicalAppearance	399	1	4	2.85	1.00
68	wwEquipment	399	1	4	2.85	1.01
69	wwAssistingOthers	399	1	4	2.85	1.02
70	wwOccupationalSuccess	399	1	4	2.77	1.19
71	wwTrustworthyFriend	399	1	4	2.76	1.09
72	wwFriendships	399	1	4	2.57	1.03
73	wwLoans	399	1	4	2.41	1.23
	>=90% of respondents rated item as 'moderately necessary 'or' very necessary'					

6.3.6 GOAL SATISFACTION IN SYLHET (RURAL SITE)

Table 6.7 provides frequency distributions for the 73 goal satisfaction items[101].

The items for which the greatest proportion of respondents stated that they were 'completely satisfied' include those to do with relationships and the family. More than 45% of the respondents stated that they were 'completely satisfied' with goals including relationship with husband, relationship with natal family and children.

More than three fourths of the respondent participants stated that they were 'not at all satisfied' with the items personal savings and vehicle. Large proportions (> 60%) were also 'not at all satisfied' with personal income, personal wealth, work success, having a salaried job (commonly interpreted as that of a male family member, such as the husband or a son) and equipment owned by the household.

[101] Once again there are a large number of 'not applicable' responses for items related to children.

Table 24 Sylhet (rural) goal satisfaction item response

	Goal item satisfaction rating	1= not at all	2= a little	3= moderately	4= mostly	5= completely	Total
1	AccessInformation	84 (21.1%)	118 (29.6%)	96 (24.1%	51 (12.8%)	50 (12.5	399
2	AccessToInfluentials	55 (13.8%)	84 (21.1%)	132 (33.1%	79 (19.8%)	49 (12.3	399
3	AssistingOthers	57 (14.3%)	78 (19.5%)	122 (30.6%	93 (23.3%)	49 (12.3	399
4	BeingAtPeace	29 (7.3%)	50 (12.5%)	129 (32.3%	114 (28.6%)	77 (19.3	399
5	Business	194 (48.6%)	63 (15.8%)	60 (15.0%	43 (10.8%)	39 (9.8%)	399
6	Character	8 (2.0%)	24 (6.0%)	107 (26.8%	131 (32.8%)	129 (32.3	399
7	Children	27 (6.8%)	17 (4.3%)	57 (14.3%	106 (26.6%)	192 (48.1	399
8	ChildrenAchievements	12 (3.8%)	37 (11.7%)	78 (24.7%	100 (31.6%)	89 (28.2	316*
9	ChildrenBehaviour	2 (0.6%)	17 (5.3%)	59 (18.6%	125 (39.3%)	115 (36.2	318*
10	ChildrenUpbringing	40 (10.8%)	108 (29.1%)	101 (27.2%	50 (13.5%)	72 (19.4	371*
11	Clothing	8 (2.0%)	56 (14.0%)	159 (39.8%	100 (25.1%)	76 (19.0	399
12	CommunityAssistance	51 (12.8%)	80 (20.1%)	137 (34.3%	79 (19.8%)	52 (13.0	399
13	CommunityDecisions	32 (8.0%)	88 (22.1%)	127 (31.8%	84 (21.1%)	68 (17.0	399
14	CommunityDevelopmen	50 (12.5%)	82 (20.6%)	137 (34.3%	74 (18.5%)	56 (14.0	399
15	CommunityFestivals	25 (6.3%)	81 (20.3%)	109 (27.3%	111 (27.8%)	73 (18.3	399
16	CommunityOrganisation	94 (23.6%)	119 (29.8%)	75 (18.8%	52 (13.0%)	59 (14.8	399
17	ConvenienceGoods	154 (38.6%)	94 (23.6%)	74 (18.5%	47 (11.8%)	30 (7.5%)	399
18	EducationalInstitutes	36 (9.0%)	92 (23.1%)	110 (27.6%	93 (23.3%)	68 (17.0	399
19	Educationfamily	79 (19.8%)	139 (34.8%)	105 (26.3%	48 (12.0%)	28 (7.0%)	399
20	EducationSelf	141 (35.3%)	126 (31.6%)	67 (16.8%	36 (9.0%)	29 (7.3%)	399
21	Electricity	80 (20.1%)	42 (10.5%)	129 (32.3%	84 (21.1%)	64 (16.0	399
22	Equipment	271 (67.9%)	58 (14.5%)	33 (8.3%)	24 (6.0%)	13 (3.3%)	399
23	FamilyHardworking	18 (4.5%)	58 (14.5%)	149 (37.3%	92 (23.1%)	82 (20.6	399
24	FamilyObligations	8 (2.0%)	20 (5.0%)	101 (25.3%	154 (38.6%)	116 (29.1	399
25	FamilyRelations	7 (1.8%)	7 (1.8%)	79 (19.8%	165 (41.4%)	141 (35.3	399
26	FamilyReputation	3 (0.8%)	32 (8.0%)	155 (38.8%	124 (31.1%)	85 (21.3	399
27	FamilyRespect	6 (1.5%)	42 (10.5%)	129 (32.3%	122 (30.6%)	100 (25.1	399
28	FamilyWorkSkills	48 (12.0%)	105 (26.3%)	126 (31.6%	59 (14.8%)	61 (15.3	399
29	Food	12 (3.0%)	51 (12.8%)	157 (39.3%	101 (25.3%)	78 (19.5	399
30	FoodProduction	153 (38.3%)	76 (19.0%)	76 (19.0%	57 (14.3%)	37 (9.3%)	399
31	Friendships	111 (27.8%)	91 (22.8%)	78 (19.5%	65 (16.3%)	54 (13.5	399
32	HealthFamilyMembers	27 (6.8%)	70 (17.5%)	163 (40.9%	96 (24.1%)	43 (10.8	399
33	HealthSelf	43 (10.8%)	83 (20.8%)	143 (35.8%	97 (24.3%)	33 (8.3%)	399
34	HouseholdGoods	34 (8.5%)	78 (19.5%)	150 (37.6%	71 (17.8%)	66 (16.5	399
35	HouseOwnership	52 (13.0%)	94 (23.6%)	93 (23.3%	80 (20.1%)	80 (20.1	399
36	Housing	37 (9.3%)	77 (19.3%)	116 (29.1%	89 (22.3%)	80 (20.1	399
37	IncomeHousehold	59 (14.8%)	108 (27.1%)	123 (30.8%	73 (18.3%)	36 (9.0%)	399
38	IncomePersonal	270 (67.7%)	41 (10.3%)	72 (18.0%	13 (3.3%)	3 (0.8%)	399
39	InLawsDecisions	36 (9.0%)	50 (12.5%)	128 (32.1%	109 (27.3%)	76 (19.0	399
40	InLawsRespect	13 (3.3%)	29 (7.3%)	116 (29.2%	129 (32.5%)	110 (27.7	397
41	InLawsSupportHelp	37 (9.3%)	46 (11.5%)	103 (25.8%	135 (33.8%)	78 (19.5	399
42	KnowledgeAndSkills	69 (17.3%)	108 (27.1%)	134 (33.6%	60 (15.0%)	28 (7.0%)	399
43	LandHoldings	66 (16.5%)	121 (30.3%)	113 (28.3%	48 (12.0%)	51 (12.8	399
44	Leaders	47 (11.8%)	51 (12.8%)	160 (40.2%	91 (22.9%)	49 (12.3	398
45	Livestock	226 (56.6%)	78 (19.5%)	32 (8.0%)	39 (9.8%)	24 (6.0%)	399
46	Loans	140 (35.1%)	68 (17.0%)	130 (32.6%	33 (8.3%)	28 (7.0%)	399
47	LocalityClean	13 (3.3%)	32 (8.0%)	151 (37.8%	104 (26.1%)	99 (24.8	399
48	LocalitySafe	13 (3.3%)	42 (10.5%)	111 (27.8%	137 (34.3%)	96 (24.1	399
49	Markets	24 (6.0%)	59 (14.8%)	109 (27.3%	91 (22.8%)	116 (29.1	399
50	Marriages	12 (9.2%)	17 (13.0%)	29 (22.1%	39 (29.8%)	34 (26.0	131*
51	NeighbourhoodRelation	4 (1.0%)	30 (7.5%)	153 (38.3%	127 (31.8%)	85 (21.3	399
52	OccupationalSuccess	250 (62.7%)	66 (16.5%)	48 (12.0%	22 (5.5%)	13 (3.3%)	399
53	PersonalRespect	11 (2.8%)	55 (13.8%)	137 (34.3%	103 (25.8%)	93 (23.3	399
54	PersonalWealth	252 (63.2%)	60 (15.0%)	51 (12.8%	23 (5.8%)	13 (3.3%)	399
55	Phone	124 (31.1%)	49 (12.3%)	39 (9.8%)	79 (19.8%)	108 (27.1	399
56	PhysicalAppearance	25 (6.3%)	70 (17.5%)	148 (37.1%	81 (20.3%)	75 (18.8	399
57	Recreation	39 (9.8%)	105 (26.3%)	115 (28.8%	76 (19.0%)	64 (16.0	399
58	RelationsHusband	6 (1.5%)	33 (8.3%)	36 (9.1%)	137 (34.5%)	185 (46.6	397
59	RelationsNatal	6 (1.5%)	21 (5.3%)	52 (13.0%	125 (31.3%)	195 (48.9	399
60	Religion	4 (1.0%)	26 (6.5%)	87 (21.8%	122 (30.6%)	160 (40.1	399
61	Rest	32 (8.0%)	64 (16.0%)	121 (30.3%	91 (22.8%)	91 (22.8	399
62	RoadsAndTransport	35 (8.8%)	45 (11.3%)	106 (26.6%	107 (26.9%)	105 (26.4	398
63	SafeWater	42 (10.5%)	38 (9.5%)	72 (18.0%	123 (30.8%)	124 (31.1	399
64	SalariedJob	242 (60.7%)	55 (13.8%)	51 (12.8%	29 (7.3%)	22 (5.5%)	399
65	SavingsHousehold	222 (55.6%)	78 (19.5%)	61 (15.3%	24 (6.0%)	14 (3.5%)	399
66	SavingsPersonal	307 (76.9%)	43 (10.8%)	23 (5.8%)	16 (4.0%)	10 (2.5%)	399
67	SelfEmployment	190 (47.6%)	74 (18.5%)	56 (14.0%	38 (9.5%)	41 (10.3	399
68	ServicesGovt	145 (36.3%)	104 (26.1%)	75 (18.8%	41 (10.3%)	34 (8.5%)	399
69	ServicesHealth	74 (18.5%)	110 (27.6%)	119 (29.8%	61 (15.3%)	35 (8.8%)	399
70	ServicesNGO	173 (43.4%)	102 (25.6%)	64 (16.0%	34 (8.5%)	26 (6.5%)	399
71	Toilet	36 (9.0%)	41 (10.3%)	97 (24.3%	104 (26.1%)	121 (30.3	399
72	TrustworthyFriend	100 (25.1%)	74 (18.5%)	85 (21.3%	65 (16.3%)	75 (18.8	399
73	Vehicle	305 (76.4%)	44 (11.0%)	45 (11.3%	0 (0.0%)	5 (1.3%)	399

6.3.7 COMPARING GOAL NECESSITY AND GOAL SATISFACTION IN SYLHET (RURAL SITE)

In this section the satisfaction of goal items in relation to their perceived necessity in the rural site is considered by comparing mean necessity and mean satisfaction scores. There was once again a fairly strong correlation between the mean goal necessity and mean goals satisfaction scores, i.e. the correlation coefficient was.555. Although the correlation was weaker than in the urban site, which was.612[102].

In Table 25 the magnitude of the rank differential X-Y ranges from -50 to +37. As previously, negative values of X-Y are taken to indicate 'shortfall' goals and positive indicate 'success goals'.

The 20 items with the highest mean necessity ratings are taken to indicate prioritised goals, using the rank differential X-Y, goal items can be categorised as follows:

(1) highly necessary and relatively, highly satisfied, i.e. prioritized success goals; and
(2) highly necessary and relatively, poorly satisfied poorly i.e. prioritized shortfall goals, Table 22 presents a summary

[102] I discussed several possible reasons for the strength of the relationship between necessity and satisfactions scores in section 6.3.4.

Table 25 Sylhet (rural) comparison of goal necessity and goal satisfaction

	Goal item	N	Necessity		Satisfaction		(X-Y)
			Mean	Rank (X)	Mean	Rank (Y)	
1	wwChildrenUpbringing	371	3.86	1	3.02	40	-39
2	wwChildrenAchievements	316	3.85	2	3.69	10	-8
3	wwMarriages	131	3.84	3	3.50	21	-18
4	wwIncomeHousehold	399	3.84	4	2.80	49	-45
5	wwRelationsHusband	397	3.83	5	4.16	2	3
6	wwEducationfamily	399	3.83	6	2.52	56	-50
7	wwFamilyRelations	399	3.80	7	4.07	3	4
8	wwChildrenBehaviour	318	3.77	8	4.05	4	4
9	wwBeingAtPeace	399	3.77	9	3.40	26	-17
10	wwReligion	399	3.75	10	4.02	6	4
11	wwHealthSelf	399	3.74	11	2.98	45	-34
12	wwLandHoldings	399	3.73	12	2.74	50	-38
13	wwHousing	399	3.72	13	3.25	31	-18
14	wwChildren	399	3.71	14	4.05	5	9
15	wwHealthFamilyMembers	399	3.70	15	3.15	34	-19
16	wwFood	399	3.69	16	3.46	22	-6
17	wwFamilyObligations	399	3.68	17	3.88	7	10
18	wwEducationalInstitutes	399	3.68	18	3.16	33	-15
19	wwSafeWater	399	3.68	19	3.62	15	4
20	wwHouseOwnership	399	3.67	20	3.11	37	-17
21	wwCharacter	399	3.66	21	3.87	8	13
22	wwSavingsHousehold	399	3.66	22	1.82	67	-45
23	wwFamilyHardworking	399	3.64	23	3.41	25	-2
24	wwServicesHealth	399	3.63	24	2.68	51	-27
25	wwToilet	399	3.62	25	3.58	17	8
26	wwElectricity	399	3.56	26	3.03	39	-13
27	wwLocalitySafe	399	3.54	27	3.65	12	15
28	wwFamilySkills	399	3.54	28	2.95	47	-19
29	wwClothing	399	3.53	29	3.45	23	6
30	wwRelationsNatal	399	3.53	30	4.21	1	29
31	wwRoadsAndTransport	399	3.51	31	3.51	20	11
32	wwLocalityClean	399	3.50	32	3.61	16	16
33	wwServicesGovt	399	3.46	33	2.29	59	-26
34	wwInLawsRespect	399	3.46	34	3.74	9	25
35	wwNeighbourhoodRelations	399	3.45	35	3.65	13	22
36	wwInLawsSupportHelp	399	3.43	36	3.43	24	12
37	wwLeaders	399	3.40	37	3.11	36	1
38	wwFamilyReputation	399	3.39	38	3.64	14	24
39	wwHouseholdGoods	399	3.39	39	3.14	35	4
40	wwBusiness	399	3.38	40	2.17	62	-22
41	wwMarkets	399	3.38	41	3.54	18	23
42	wwEducationSelf	399	3.33	42	2.21	61	-19
43	wwFamilyRespect	399	3.33	43	3.67	11	32
44	wwInLawsDecisions	399	3.32	44	3.35	28	16
45	wwCommunityAssistance	399	3.32	45	3.00	42	3
46	wwFoodProduction	399	3.28	46	2.37	57	-11
47	wwPersonalRespect	399	3.25	47	3.53	19	28
48	wwSavingsPersonal	399	3.19	48	1.44	72	-24
49	wwIncomePersonal	399	3.18	49	1.59	71	-22
50	wwPhone	399	3.18	50	2.99	44	6
51	wwRest	399	3.14	51	3.36	27	24
52	wwCommunityDevelopment	399	3.11	52	3.01	41	11
53	wwAccessToInfluentials	399	3.10	53	2.96	46	7
54	wwAccessInformation	399	3.10	54	2.66	53	1
55	wwCommunityDecisions	399	3.08	55	3.17	32	23
56	wwCommunityFestivals	399	3.07	56	3.32	29	27
57	wwLivestock	399	3.07	57	1.89	65	-8
58	wwSelfEmployment	399	3.07	58	2.16	63	-5
59	wwKnowledgeAndSkills	399	3.06	59	2.67	52	7
60	wwPersonalWealth	399	3.02	60	1.71	68	-8
61	wwRecreation	399	2.99	61	3.05	38	23
62	wwServicesNGO	399	2.99	62	2.09	64	-2
63	wwConvenienceGoods	399	2.92	63	2.26	60	3
64	wwSalariedJob	399	2.88	64	1.83	66	-2
65	wwCommunityOrganisations	399	2.86	65	2.66	54	11
66	wwVehicle	399	2.85	66	1.39	73	-7
67	wwPhysicalAppearance	399	2.85	67	3.28	30	37
68	wwEquipment	399	2.85	68	1.62	70	-2
69	wwAssistingOthers	399	2.85	69	3.00	43	26
70	wwOccupationalSuccess	399	2.77	70	1.70	69	1
71	wwTrustworthyFriend	399	2.76	71	2.85	48	23
72	wwFriendships	399	2.57	72	2.65	55	17
73	wwLoans	399	2.41	73	2.35	58	15

Note: (X-Y) refers to the necessity ranking less the satisfaction ranking . Item necessity was rated on a four-point response scale (4 = very necessary, 3= necessary, 2 = a little necessary, 1 = not at all necessary). Goal satisfaction was rated on a five -point response scale (5 = completely satisfied, 4 = mostly satisfied, 3 = moderately satisfied, 2 = a little satisfied. 1 = not at all satisfied)

Table 26 Sylhet (rural) Prioritized success goals and prioritized shortfall goals[103]

	Goal item	N	Necessity		Satisfaction		(X-Y)
			Mean	Rank (X)	Mean	Rank (Y)	
Prioritised Shortfall goals	wwEducationfamily	399	3.83	6	2.52	56	-50
	wwIncomeHousehold	399	3.84	4	2.80	49	-45
	wwChildrenUpbringing	371	3.86	1	3.02	40	-39
	wwLandHoldings	399	3.73	12	2.74	50	-38
	wwHealthSelf	399	3.74	11	2.98	45	-34
	wwHealthFamilyMembers	399	3.70	15	3.15	34	-19
	wwMarriages	131	3.84	3	3.50	21	-18
	wwHousing	399	3.72	13	3.25	31	-18
	wwBeingAtPeace	399	3.77	9	3.40	26	-17
	wwHouseOwnership	399	3.67	20	3.11	37	-17
	wwEducationalInstitutes	399	3.68	18	3.16	33	-15
Prioritised Success goals	wwChildrenAchievements	316	3.85	2	3.69	10	-8
	wwFood	399	3.69	16	3.46	22	-6
	wwRelationsHusband	397	3.83	5	4.16	2	3
	wwFamilyRelations	399	3.80	7	4.07	3	4
	wwChildrenBehaviour	318	3.77	8	4.05	4	4
	wwReligion	399	3.75	10	4.02	6	4
	wwSafeWater	399	3.68	19	3.62	15	4
	wwChildren	399	3.71	14	4.05	5	9
	wwFamilyObligations	399	3.68	17	3.88	7	10

Eleven of the prioritised goals were shortfall goals with X-Y ranging from -15 to -50. In contrast to Dhaka this group of items appeared to be far more diverse. Nonetheless certain groups of goal items sharing a common theme were evident. For instance items concerning the wealth and assets of the household i.e. landholdings (-38) and house ownership (-17) are items which are important but their satisfaction is low. Health, both of the respondent. Health both of the respondent (-34) and of health family members (-19) were also shortfall items.

Children's upbringing (-39), family education (-50) and educational institutes (-15) comprise another group. As discussed previously providing children with a good education is an important part of providing them with a good upbringing, and this depends on being able to access educational institutions.

The remaining shortfall items were income household (-45), marriages (-18), and being at peace (-17).

The remaining 9 items were prioritised success items. One group of items concerns children (+9), children's achievements (-8)[104] and children's behaviour (+4). Another group of success items were related to relations with husband (+3), family relations (+4), family

[103] An item which is highly satisfied in relation to its importance has a rank differential, X-Y, within +/- 10 places. An item which is poorly satisfied in relation to its importance has a negative value of X-Y exceeding 10 places.

obligations (+10). These relational items reflect the importance of the extended family unit in Sylhet.

Food (-6) and safe water (+4) were success items and reflect the living conditions and better economic status of Sylhet respondents. The final success item was religion (+4), which respondents in Sylhet prioritised and reported being highly satisfied with.

6.4 COMPARING THE TWO SITES: DIFFERENCES IN GOAL NECESSITY AND GOAL SATISFACTION

In the previous section goal necessity and goal satisfaction have been considered for each site separately. However, it was possible to determine differences in goal priorities and goal satisfaction in the two sites. This is not a surprising result given the different characteristics of the two sites and the socio-demographic and economic conditions of the respondents. In this section I explore this further by comparing the two sites directly and examining the differences and convergences across the two sites for the necessity and the satisfaction of the list of goals.

In order to do this, I first identify and explore the significance of the items which are *relatively* more important within each site while not being important in the other, and then those items which are important in both sites. I then identify items which are relatively more satisfied in one site while not being satisfied in the other; and items which are equally satisfied in both sites. In order to do this the rankings of the mean goal importance score and the rankings of the mean satisfaction scores from the two sites are compared[105.] In considering these findings, it should be noted that the comparisons are primarily between rankings and not the absolute mean scores. The differences in goal necessity and satisfaction are discussed with reference to the characteristics of the context and the residents themselves.

6.4.1 COMPARING GOAL NECESSITY BETWEEN THE TWO SITES

The mean goal necessity scores and their rankings for the two sites are shown in Table 27. The last column (X-Y) shows the difference in rank in the two sites. This enables us to identify the items for which perceived necessity (in terms of the goals necessity rank) differs most between the two sites. A similar exercise was attempted by examining the differences in actual mean scores. The differences in actual mean necessity ratings, which ranged from -

[105] The goal item 'cooking arrangements' is not included in this exercise as it was only administered in the urban site (Dhaka).

0.41 to +1.50, were more difficult to interpret[106]. However, overall items with the greatest difference in mean necessity scores also tended to have the greatest difference in ranking of mean necessity score. Furthermore, comparing rankings enables us to make comparisons of the importance of goals in relation to each other.

The rank differences range from + 29 to - 46. Positive values of X-Y indicate items which are ranked higher in terms of perceived necessity in the rural site; while negative values of (X-Y) indicate items ranked higher in terms of perceived necessity in the urban site.

For the purposes of this discussion, rank differences items where X-Y is within ± 10 rank places are considered to be similarly important in the two sites, i.e. similarly prioritised. On the other hand, goal items for which X-Y exceeds 10 places have been taken to indicate items which are prioritised differently in the two sites i.e. perceived necessity is *markedly different* in the two sites. It should be understood, however, that an item being *relatively* more important within a particular site does not mean that it is actually important when considering its ranking *within* site. To illustrate, in Table 27 the item 'leaders' has the greatest rank differential (+29) indicating that it is more important in Sylhet. However, when we look at Sylhet data on its own, leaders is actually ranked 37th out of 73 items in terms of mean necessity score.

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[106] For instance there were only 9 items which had higher mean necessity scores in Dhaka (the difference ranging from +.07 to +.41). The remaining 62 items all had higher mean necessity scores in Sylhet (the difference ranging from -.01 to -1.5).

Table 27 Comparing goal necessity for the two sites

Goal necessity	Urban		Rural			
	Mean	Rank (X)	Mean	Rank (Y)	(X-Y)	
wwLeaders	2.43	66	3.40	37	29	*Items ranked higher in necessity in the rural site*
wwCommunityDevelopment	1.60	73	3.11	52	21	
wwFamilyReputation	2.86	56	3.39	38	18	
wwFood	3.14	34	3.69	16	18	
wwFoodProduction	2.68	63	3.28	46	17	
wwAccessToInfluentials	2.02	69	3.10	53	16	
wwCommunityDecisions	1.84	71	3.08	55	16	
wwClothing	3.03	44	3.53	29	15	
wwFamilyRelations	3.37	21	3.80	7	14	
wwFamilyRespect	2.84	57	3.33	43	14	
wwMarriages	3.40	17	3.84	3	14	
wwEducationfamily	3.40	19	3.83	6	13	
wwBusiness	2.92	52	3.38	40	12	
wwCommunityFestivals	2.33	68	3.07	56	12	
wwHousing	3.33	25	3.72	13	12	
wwNeighbourhoodRelations	3.02	47	3.45	35	12	
wwFamilyObligations	3.29	28	3.68	17	11	
wwCharacter	3.19	31	3.66	21	10	
wwLandHoldings	3.36	22	3.73	12	10	
wwLivestock	2.37	67	3.07	57	10	
wwInLawsDecisions	2.89	53	3.32	44	9	
wwLocalityClean	3.07	40	3.50	32	8	
wwLocalitySafe	3.11	35	3.54	27	8	
wwInLawsSupportHelp	3.03	43	3.43	36	7	
wwAccessInformation	2.78	60	3.10	54	6	
wwVehicle	1.80	72	2.85	66	6	
wwCommunityOrganisations	1.98	70	2.86	65	5	
wwSafeWater	3.35	24	3.68	19	5	
wwCommunityAssistance	2.95	49	3.32	45	4	
wwToilet	3.24	29	3.62	25	4	
wwInLawsRespect	3.09	37	3.46	34	3	
wwPersonalRespect	2.94	50	3.25	47	3	
wwChildrenAchievements	3.58	4	3.85	2	2	
wwChildrenBehaviour	3.46	10	3.77	8	2	
wwChildrenUpbringing	3.63	3	3.86	1	2	
wwEducationalInstitutes	3.38	20	3.68	18	2	
wwIncomeHousehold	3.49	5	3.84	4	1	
wwMarkets	3.05	42	3.38	41	1	
wwRoadsAndTransport	3.15	32	3.51	31	1	
wwElectricity	3.32	26	3.56	26	0	*Items ranked similarly in the two sites*
wwHouseholdGoods	3.08	39	3.39	39	0	
wwRest	2.94	51	3.14	51	0	
wwChildren	3.45	13	3.71	14	-1	
wwHealthSelf	3.47	9	3.74	11	-2	
wwRecreation	2.80	59	2.99	61	-2	
wwBeingAtPeace	3.48	6	3.77	9	-3	
wwHealthFamilyMembers	3.45	12	3.70	15	-3	
wwRelationsHusband	3.64	2	3.83	5	-3	
wwRelationsNatal	3.30	27	3.53	30	-3	
wwAssistingOthers	2.51	65	2.85	69	-4	
wwKnowledgeAndSkills	2.87	55	3.06	59	-4	
wwSelfEmployment	2.89	54	3.07	58	-4	
wwConvenienceGoods	2.81	58	2.92	63	-5	
wwFamilyHardworking	3.40	18	3.64	23	-5	
wwEquipment	2.73	62	2.85	68	-6	
wwLoans	2.67	64	2.41	73	-9	
wwPhone	3.06	41	3.18	50	-9	
wwReligion	3.64	1	3.75	10	-9	
wwFriendships	2.76	61	2.57	72	-11	
wwEducationSelf	3.20	30	3.33	42	-12	
wwFamilySkills	3.41	15	3.54	28	-13	
wwHouseOwnership	3.48	7	3.67	20	-13	
wwServicesHealth	3.46	11	3.63	24	-13	
wwSavingsHousehold	3.47	8	3.66	22	-14	
wwIncomePersonal	3.14	33	3.18	49	-16	
wwSalariedJob	2.97	48	2.88	64	-16	
wwServicesGovt	3.45	14	3.46	33	-19	
wwPhysicalAppearance	3.02	46	2.85	67	-21	
wwPersonalWealth	3.09	38	3.02	60	-22	
wwSavingsPersonal	3.35	23	3.19	48	-25	
wwTrustworthyFriend	3.02	45	2.76	71	-26	*Items ranked higher in necessity in the urban site*
wwOccupationalSuccess	3.10	36	2.77	70	-34	
wwServicesNGO	3.40	16	2.99	62	-46	

There are 17 items which are relatively more important in the rural site and 15 items which are relatively more important in the urban site. Examining these goals reveals groups of items with certain overarching themes. These will be discussed with reference to the socio-economic situation of respondents and characteristics of the location.

The rural site: Influence and respect

Important themes that emerged in the items that were relatively more important in the rural site are concerned with the prevailing social hierarchy, and the household's position in the local community or society (*samaj*). Rural societies are still characterised by a long-standing hierarchy determined by socio-economic status. Richer households normally constitute the village elite and possess greater power and influence. Within a village community, such as that of the Sylhet site, patron-client relationships between richer and poorer households have historically determined the social and political organisation of the village. Land ownership was traditionally the key to driving these hierarchical relations (Jansen, 1983). Thus, richer households were able to control land-poor households via share-cropping arrangements and access to money markets. Land-poor households entered these exploitative relations out of need, sacrificing longer term autonomy for immediate term survival and subsistence.

The item with the greatest rank differential was good leaders (+29) – an item that had been ranked 66th in the urban site and 37th in the rural site. This is related to the item access to influentials (+16), which again was ranked 69th in the urban site and 53rd in the rural site. It is important for households to have some form of association (*asha- jawa*) with elite or richer groups either through marriage or kin-based relations (*attiyota).* Not only do these associations confer status and prestige (*shonman*) on a household, they can also be the means to access services and resources. Leaders within an area, such as the rural research site, wield political and economic power. This means that they are often able to influence access to government services as well as the distribution of relief aid. During fieldwork, one respondent reported that her household had been unable to have their homestead included in the electrification of the village. She explained that this was because her husband's family was considered an 'outsider' (*bideshi*) as it had only settled in the village thirty years previously. As such, their entitlement claims were much weaker. Another respondent reported that several years ago the village had received an allocation of corrugated iron sheets suitable for roofing. Instead of being distributed on the basis of need, a selected few families on close terms with the Union Council Chairman received them.

The significance of a family (*paribar*) member holding a certain official position or role within the community is also reflected in the greater importance given to participating in community development (+21), community decisions (+ 16), community festivals (+12), and family respect (+14).

A second group of items reflects the central importance of the family (*paribar*) and kinship group (*bongsho or gushti*)[107] in the rural setting. Respondents' families (*paribars*) commonly resided in extended homesteads (*bari*) or neighbourhoods (*paras*) with other families of the extended kinship group (*bongsho*). These items include good family relations (+14) and being able to fulfil family obligations (+ 11).[108] Close relationships between family members are a source of satisfaction because of the positive experience they nurture. However, the ability of a family to project an image of a cohesive and extended unit also enhances reputation (*sunam*), elicits external respect, and puts the family in a position of authority within the community. While individual families (*paribars*) within an extended family unit (*bongsho or gushti*) will vary in terms of their socio-economic status, there is a strong expectation that better off family members will help less well-off members. An important part of the motivation to help is precisely to maintain a good external reputation (*sunam).* The item *marriages* (+14) is an example of a family obligation that should be fulfilled, and often it is the extended family (*bongsho*) who will arrange and finance the marriages of younger siblings as well as nephews and nieces. The elders of a family are held accountable for the conduct and welfare of children within their extended household (White, 2007). Arranging the marriage of female household members in a timely manner is particularly important in order to avoid scandal and ridicule (Kotalova, 1993). Marriages are also a route by which a household's prestige can be enhanced or indeed lost (ibid.). Ideally, they should be arranged through negotiations conducted by trusted members of the extended family. The key focus in marriage negotiations is to form an alliance (*attiyota kora)* with another family of similar, if not better, social and economic standing.

Other items such as the education of family members (+13) and business (+12) have instrumental value in that they open up routes to more lucrative and secure incomes (Asadullah, 2006), confer status, and positively impact upon the household's influence within the community. Similarly, maintaining and enhancing the land-holdings (+10) held by a family is desirable not only for income generation but as a visible demonstration of a family's wealth which enables them to leverage positions of authority within the community.

Other items which were relatively more important in Sylhet reflect their relevance to the residents of a rural setting i.e. ownership of livestock (+10) and food production (+17).

Finally, items which can be considered as day-to-day necessities i.e. food eaten (+18), clothing (+15), and housing (+12) were relatively more important in Sylhet. Given that

[107] Bongsho or gushti refers to households of the same patrilineage.

[108] These are also items which would be susceptible to social desirability bias.

respondents in Sylhet were better off than those in Dhaka, it is possible that they are more discerning about these day-to-day consumables (Hossain et al, 2011). In addition, although basic necessities, these items also hold symbolic significance. Thus, we live well (*bhalo thaki),* we eat well *(bhalo kai*) and we wear nice clothes *(bhalo poshak pori)* signal a certain economic and social standing.

The urban site: The individual, incomes and amenities

Examining the items that were *relatively* more important in Dhaka, once again several distinct themes can be identified.

One group of related items concerns service provision such as *government services* (-19), *NGO services* (-46) and *health services* (-13). Respondents in the urban site were poorly served by the municipality with a lack of paved roads, inadequate garbage collection, mostly private provision of water and sanitation services, and no government (i.e. affordable) health services. Although there were several NGOs reportedly working in the area, there was little evidence of this from our observations and conversations with respondents. The two NGO run primary schools that we came across, were both heavily oversubscribed, and several respondents told us that they had been unable to admit their children. Meanwhile the nearest government primary schools were located at a significant distance.

Another major group of items concerning incomes and capabilities of the individual and of family members included salaried job (-16), family skills (-13), occupational success (-34) and personal income (-16). Personal savings (-25), household savings (-13), and house ownership (-14) was also far more important. Respondents in Dhaka were considerably poorer even if a large proportion of the respondents were in employment. Female residents of the Dhaka site are more likely to be engaged in income generating activities and paid employment, and more focussed on income generation. Many of them will have migrated with their families to the capital to avoid impoverishment in their home villages or towns. Other personal attributes such as maintaining a good appearance or one's own education were also of far more importance in the urban setting. These aspects take on greater importance for women who are actively looking for employment.

Close relationships outside of those within the family including friendships (-11) and having a trustworthy friend (-25) were of more importance to the women in Dhaka. In contrast to the rural setting where extended families either live together or in close proximity within communities, households in the urban setting consist mainly of a nuclear family unit, residing in densely arranged dwellings and surrounded by a population diverse in their length of residence and place of origin. The majority of women in Dhaka were engaged in employment outside of their homes, and as such have greater access to market places. All

this means that the women residents of the Dhaka site have far greater opportunities to interact and forge relationships with people who are otherwise unrelated to them. In the urban context these relationships are particularly significant as they can represent an informal safety net, and a source of information and support for women with limited recourse to other resources (see e.g. Hossain, 2005; Paul, 2006).

Rural and urban sites: The family unit and close relationships, and daily living

The items with rank differentials within +/- 5 places, which also had high necessity rankings within sites (i.e. within the top 15 items) were identified to determine items which are important in *both* sites.

Table 28. Items prioritized in both sites

Goal necessity	Urban		Rural		
	Mean	Rank (X)	Mean	Rank (Y)	(X-Y)
wwRelationsHusband	3.64	2	3.83	5	-3
wwChildrenUpbringing	3.63	3	3.86	1	2
wwChildrenAchievements	3.58	4	3.85	2	2
wwIncomeHousehold	3.49	5	3.84	4	1
wwBeingAtPeace	3.48	6	3.77	9	-3
wwHealthSelf	3.47	9	3.74	11	-2
wwChildrenBehaviour	3.46	10	3.77	8	2
wwHealthFamilyMembers	3.45	12	3.70	15	-3
wwChildren	3.45	13	3.71	14	-1

I examined the goal items prioritised in the two sites and found that there was consensus regarding necessity for items relating to close relationships within the immediate family unit. These goal items included relationship with husband (-3), with natal family (-3), respect from in-laws (3), and items to do with children[109] (-1), children's achievements (2), children's upbringing (2), and children's behaviour (2). Altogether these items confirm the importance of the family unit, and the respondent's identity as a wife and mother.

Other items which were prioritised in both sites also indicate the importance of the wellbeing of the individual and the family unit as a whole. These items were health family members (-3), health self (-2), income households (+1) and being at peace (-3).

For young women in Bangladesh the prevailing patriarchal social system dictates that they marry and shift both physically and socially to the guardianship of their husband. Socio-cultural norms dictate that the most important role after that of being a wife is motherhood. For women, particularly within the extended family, the bearing of children and in particular sons who can carry on the *bongsho*, elevates her status (Kotalova, 1993). Children themselves are a source of pleasure and happiness, providing companionship, as well as emotional, physical and financial support as they grow older (Mccain 1986).

[109] The reduced sample for items relating to children should be borne in mind.

6.4.2 COMPARING GOAL SATISFACTION BETWEEN THE TWO SITES

I also considered the differences in goal satisfaction between the two sites. The mean goal satisfaction scores and their ranks for the two sites are shown in Table 29. Once again the last column (X-Y) shows the difference in rank in the two sites, and enables us to identify the items for which perceived satisfaction differs most between the two sites. As before, rank differences greater than 10 places are considered to indicate considerable differences in goal satisfaction, whereas differences within 5 places are considered as indicative of items for which levels of satisfaction are similar. Considering the items which are likely to be more satisfied within each site, it is evident that there is a considerable amount of overlap with the items that were prioritized in terms of necessity. This is not surprising as it has already been shown in previous sections (see 6.3.4 and 6.3.7) that mean satisfaction scores and mean necessity scores within each site, had reasonably large correlation coefficients.

The patterns of relative goal satisfaction can be understood considering the discussion in the previous section and what is known concerning the socio-demographic and economic status of the women, as well as the characteristics of the two sites. In order to avoid repetition these will not be discussed further.

Table 29 Comparing goal satisfaction for the two sites

Goal satisfaction	Urban		Rural			
	Mean	Rank (X)	Mean	Rank (Y)	(X-Y)	
CommunityDecisions	1.14	72	3.17	32	40	*Items ranked higher in satisfaction in the rural site*
Religion	2.32	40	4.02	6	34	
CommunityDevelopment	1.15	71	3.01	41	30	
Leaders	1.62	62	3.11	36	26	
AccessToInfluentials	1.36	66	2.96	46	20	
CommunityFestivals	2.11	47	3.32	29	18	
FamilyRespect	2.69	28	3.67	11	17	
CommunityOrganisations	1.19	70	2.66	54	16	
HouseOwnership	1.82	52	3.11	37	15	
InLawsRespect	2.73	24	3.74	9	15	
LocalityClean	2.66	30	3.61	16	14	
InLawsSupportHelp	2.55	36	3.43	24	12	
InLawsDecisions	2.44	38	3.35	28	10	
PersonalRespect	2.69	29	3.53	19	10	
Phone	1.75	54	2.99	44	10	
Livestock	1.13	73	1.89	65	8	
Rest	2.56	35	3.36	27	8	
CommunityAssistance	2.08	49	3.00	42	7	
FoodProduction	1.45	64	2.37	57	7	
Business	1.36	67	2.17	62	5	
RelationsNatal	3.27	6	4.21	1	5	
HouseholdGoods	2.36	39	3.14	35	4	
Toilet	2.76	21	3.58	17	4	
Recreation	2.27	41	3.05	38	3	
RoadsAndTransport	2.74	23	3.51	20	3	
AssistingOthers	2.15	45	3.00	43	2	
FamilyReputation	2.83	16	3.64	14	2	
ServicesGovt	1.68	61	2.29	59	2	
Character	3.19	8	3.87	8	0	
Children	3.31	5	4.05	5	0	Items ranked similarly in the two sites
ChildrenAchievements	3.03	10	3.69	10	0	
FamilyObligations	3.21	7	3.88	7	0	
FamilyRelations	3.39	3	4.07	3	0	
Housing	2.65	31	3.25	31	0	
LandHoldings	1.98	50	2.74	50	0	
RelationsHusband	3.47	2	4.16	2	0	
SafeWater	2.86	15	3.62	15	0	
Clothing	2.74	22	3.45	23	-1	
ConvenienceGoods	1.69	59	2.26	60	-1	
NeighbourhoodRelations	2.97	12	3.65	13	-1	
Equipment	1.24	68	1.62	70	-2	
Food	2.77	20	3.46	22	-2	
ChildrenBehaviour	3.70	1	4.05	4	-3	
PersonalWealth	1.39	65	1.71	68	-3	
Vehicle	1.20	69	1.39	73	-4	
AccessInformation	2.10	48	2.66	53	-5	
PhysicalAppearance	2.73	25	3.28	30	-5	
EducationSelf	1.74	55	2.21	61	-6	
EducationalInstitutes	2.72	26	3.16	33	-7	
Electricity	2.63	32	3.03	39	-7	
Loans	1.90	51	2.35	58	-7	
KnowledgeAndSkills	2.16	44	2.67	52	-8	
LocalitySafe	3.35	4	3.65	12	-8	
Markets	3.11	9	3.54	18	-9	
OccupationalSuccess	1.68	60	1.70	69	-9	
SalariedJob	1.72	57	1.83	66	-9	
SavingsHousehold	1.71	58	1.82	67	-9	
SavingsPersonal	1.52	63	1.44	72	-9	
Marriages	2.97	11	3.50	21	-10	
FamilyHardworking	2.93	14	3.41	25	-11	
ServicesNGO	1.77	53	2.09	64	-11	
BeingAtPeace	2.96	13	3.40	26	-13	
Educationfamily	2.18	43	2.52	56	-13	
Friendships	2.21	42	2.65	55	-13	
ServicesHealth	2.54	37	2.68	51	-14	
TrustworthyFriend	2.57	34	2.85	48	-14	
IncomePersonal	1.74	56	1.59	71	-15	
HealthFamilyMembers	2.83	18	3.15	34	-16	
IncomeHousehold	2.59	33	2.80	49	-16	
SelfEmployment	2.14	46	2.16	63	-17	
HealthSelf	2.72	27	2.98	45	-18	*Items ranked higher in satisfaction in the urban site*
ChildrenUpbringing	2.82	19	3.02	40	-21	
FamilyWorkSkills	2.83	17	2.95	47	-30	

Note: Goal satisfaction was rated on a five -point response scale (5 = completely satisfied, 4 = mostly satisfied, 3 = moderately satisfied, 2 = a little satisfied, 1 = not at all satisfied)

6.5 WILL WEIGHTING GOAL SATISFACTION SCORES IMPROVE THE MEASUREMENT OF SUBJECTIVE QOL?

The BGA instrument is effectively a list of goals from which the respondent is able to select items that they consider necessary to their quality of life and rate their satisfaction with each item. The measurement of perceived QoL may be in terms of satisfaction ratings, or necessity weighted (and individualised) satisfaction ratings, enabling the calculation of the gap referred to in the WeD definition of QoL as "the outcome of the gap between people's goals and perceived resources, in the context of their culture, values, and experiences of un/happiness'.

Scores from the BGA instrument are individualized through two processes:

1. The satisfaction rating for each goal item is multiplied by its importance rating to obtain a weighted satisfaction score (WGS).
2. Any item rated as 'not at all necessary' is recoded to 'not applicable'. An *overall* individualized Goal Satisfaction score (IGS) is then computed as the mean of *only those items that are applicable* to a respondent.

The second step makes intuitive sense – if an item is rated by a respondent as *not at all necessary* whether or not it is satisfied is irrelevant to that respondent's quality of life.

As part of the development and validation of the BGA instrument, it is important to determine whether necessity weighting of satisfactions ratings, and individualisation, improves the measurement of perceived QoL, above that of using only satisfaction ratings.

Within the literature, as discussed earlier, and in my data set there are indications that necessity and satisfaction scores are related. This was evidenced by the significant and fairly large correlation coefficients between mean satisfaction scores and mean necessity scores for the goals items in both sites. These were r=.612 (p<.001) in the urban site and.555 (p<.001) in the rural site (see sections 6.3.4 and 6.3.7). In general respondents tended to be more satisfied with the aspects of life that they consider to be most necessary, which may be psychologically adaptive. Whether this makes necessity weighting and individualisation of satisfaction ratings redundant needs to be explored further. However, the correlations quoted above only refer to the mean values; there was a range of necessity ratings and of satisfaction ratings for each item.

A complexity that arises when computing weighted goal satisfaction scores is that they will vary considerably depending on how the original scales are numbered. This in turn will impact on the size of correlations with unweighted satisfaction scores. In the next section I will explore this complexity further.

6.5.1 VARIATION OF SCALE NUMBERING AND IMPACT ON COMPUTED WEIGHTED GOAL SATISFACTION SCORES

In this section, I will examine the weighted goal satisfaction (WGS) and individualized goal satisfaction scores obtained using two different numbering algorithms, and assess how this influences satisfaction scores. The two numbering algorithms are as follows:

- Algorithm A: satisfaction =1 to 5, necessity = 1 to 4, resulting in computed weighted goal satisfaction scores with range 1 to 20; and
- Algorithm B satisfaction = 0 to 4, necessity = 0 to 3, and computed weighted goal satisfaction scores have a range of 0 to 12.

Table 30 shows the resulting computed values for weighted and individualized goal satisfaction scores when the rating scales are numbered according to Algorithm A.

Table 30 Computation of weighted and individualized goal satisfaction scores - Algorithm A

		Satisfaction				
		not at all satisfied	a little satisfied	moderately satisfied	mostly satisfied	completely satisfied
Necessity		1	2	3	4	5
not at all necessary	1*	1*	2*	3*	4*	5*
a little necessary	2	2	4	6	8	10
necessary	3	3	6	9	12	15
very necessary	4	4	8	12	16	20

*coded as system missing prior to computing individualized goal satisfaction (IGS) score

Possible IGS scores after omitting items which are not at all necessary range from 2 to 20. Examining the scores there are several issues. Firstly, different combinations of necessity rating and satisfaction rating result in the same weighted goal satisfaction score (i.e. 3, 4, 6 and 12), making the interpretation of weighted scores difficult. Another issue with the scores is that items that are 'not at all satisfied' have possible values of 2, 3, and 4. This means that when the overall individualized goal satisfaction (IGS) score is obtained by taking the mean of *applicable items*, items which are 'not at all satisfied' can still make a substantial contribution to the final IGS score. In other words, algorithm A may result in an inflated assessment of goal satisfaction.

In algorithm B the two scales start from 0. The individualized goal satisfaction scores now range from 0 to 12 (see Table 31).

Table 31 Computation of necessity weighted satisfaction score (necessity = 0 to 3, satisfaction = 0 to 4).

		Satisfaction				
		not at all satisfied	a little satisfied	moderately satisfied	mostly satisfied	completely satisfied
Necessity		0	1	2	3	4
not at all necessary	0*	0*	0*	0*	0*	0*
a little necessary	1	0	1	2	3	4
necessary	2	0	2	4	6	8
extremely necessary	3	0	3	6	9	12

*coded as system missing prior to computing individualized goal satisfaction (IGS) score

In this case there were fewer combinations of necessity and satisfaction rating which result in the same weighted goal satisfaction score. Any item that is 'not at all satisfied' result in a 0 score. This means that when computing an overall IGS score for a list of items, by taking the mean of applicable items, items which are' not at all satisfied' will reduce the overall IGS score. Overall, algorithm B appears to result in a more valid assessment of goal satisfaction, while also taking into account individual differences in goal importance. Algorithmn A on the other hand, with its wider range, and greater number of equivalent scores appears to distort the scores.

6.5.2 HOW DOES WEIGHTING AND INDIVIDUALIZING INFLUENCE SATISFACTION SCORES

I also examined how the processes of weighting and individualizing changed the satisfaction scores.I computed necessity weighted and individualized scores, using the two numbering algorithms for each goal item and examined the relationship with unweighted goal satisfaction scores for each sample using the Spearman's Rank Order correlation coefficient (rho)[110]. These are shown in Table 32 (algorithm A) and Table 33 (algorithm B). The reduced *n* for the individualized scores (IGS) arises because of the exclusion of items rated 'not at all necessary'.

[110] The Spearman rank-order correlation coefficient) is a nonparametric measure of the strength and direction of association that exists between two variables measured on at least an ordinal scale.

Table 32 Correlation between unweighted goal satisfaction scores and, weighted and individualized scores – Algorithm A

Correlation (sat= 1 to 5, nec=1-4)	Dhaka(urban)				Sylhet (rural)			
	WGS		IGS		WGS		IGS	
	n	r	n	r	n	r	n	r
1 AccessInformation	394	0.915	344	0.919	399	0.918	362	0.923
2 AccessToInfluentials	394	0.728	214	0.858	399	0.87	382	0.883
3 AssistingOthers	394	0.921	351	0.937	399	0.842	345	0.876
4 BeingAtPeace	394	0.885	394	0.885	399	0.887	397	0.908
5 Business	394	0.682	350	0.747	399	0.925	359	0.949
6 Character	394	0.693	381	0.810	399	0.865	395	0.881
7 Children	394	0.853	366	0.945	399	0.805	380	0.924
8 ChildrenAchievements	285	0.898	283	0.913	316	0.94	316	0.940
9 ChildrenBehaviour	309	0.765	303	0.829	318	0.868	313	0.894
10 ChildrenUpbringing	280	0.927	278	0.934	371	0.968	370	0.979
11 Clothing	394	0.844	386	0.903	399	0.841	396	0.849
12 CommunityAssistance	394	0.938	377	0.943	399	0.897	386	0.904
13 CommunityDecisions	394	0.448	237	0.627	399	0.855	374	0.896
14 CommunityDevelopment	394	0.542	141	0.740	399	0.875	379	0.893
15 CommunityFestivals	394	0.779	352	0.849	399	0.82	372	0.874
16 CommunityOrganisations	394	0.586	291	0.737	399	0.898	345	0.939
17 ConvenienceGoods	394	0.880	369	0.905	399	0.846	350	0.918
18 Cooking facilities	394	0.839	384	0.915		.		.
19 EducationalInstitutes	394	0.874	392	0.878	399	0.945	396	0.958
20 Educationfamily	394	0.907	384	0.948	399	0.972	399	0.972
21 EducationSelf	394	0.789	360	0.873	399	0.874	376	0.919
22 Electricity	394	0.869	392	0.873	399	0.84	386	0.918
23 Equipment	394	0.565	319	0.828	399	0.755	344	0.830
24 FamilyHardworking	394	0.794	391	0.815	399	0.923	396	0.923
25 FamilyObligations	394	0.802	393	0.875	399	0.804	396	0.828
26 FamilyRelations	394	0.863	391	0.900	399	0.869	392	0.923
27 FamilyReputation	394	0.896	393	0.919	399	0.822	395	0.822
28 FamilyRespect	394	0.913	390	0.855	399	0.832	388	0.849
29 FamilyWorkSkills	394	0.831	392	0.892	399	0.935	390	0.943
30 Food	394	0.859	389	0.812	399	0.853	397	0.870
31 FoodProduction	394	0.791	379	0.942	399	0.907	376	0.936
32 Friendships	394	0.913	353	0.841	399	0.894	324	0.914
33 HealthFamilyMembers	394	0.829	393	0.935	399	0.897	394	0.911
34 HealthSelf	394	0.883	393	0.894	399	0.92	399	0.920
35 HouseholdGoods	394	0.912	389	0.936	399	0.863	391	0.885
36 HouseOwnership	394	0.912	393	0.917	399	0.915	393	0.938
37 Housing	394	0.886	391	0.907	399	0.896	396	0.921
38 IncomeHousehold	394	0.847	383	0.909	399	0.959	397	0.960
39 IncomePersonal	394	0.909	368	0.927	399	0.647	337	0.858
40 InLawsDecisions	394	0.936	362	0.946	399	0.833	382	0.860
41 InLawsRespect	394	0.917	378	0.919	397	0.83	386	0.850
42 InLawsSupportHelp	394	0.928	366	0.936	399	0.856	387	0.886
43 KnowledgeAndSkills	394	0.907	345	0.898	399	0.857	364	0.877
44 LandHoldings	394	0.900	388	0.928	399	0.913	394	0.944
45 Leaders	394	0.785	278	0.898	398	0.867	386	0.889
46 Livestock	394	0.075	327	0.935	399	0.845	369	0.908
47 Loans	394	0.755	312	0.867	399	0.674	253	0.836
48 LocalityClean	394	0.859	387	0.689	399	0.832	397	0.892
49 LocalitySafe	394	0.525	364	0.875	399	0.852	387	0.874
50 Markets	394	0.662	389	0.803	399	0.923	387	0.930
51 Marriages	95	0.832	94	0.828	131	0.983	129	0.982
52 NeighbourhoodRelations	394	0.233	384	0.260	399	0.815	394	0.824
53 OccupationalSuccess	394	0.895	366	0.918	399	0.826	305	0.889
54 PersonalRespect	394	0.916	386	0.935	399	0.868	379	0.870
55 PersonalWealth	394	0.766	383	0.790	399	0.842	347	0.874
56 Phone	394	0.828	348	0.874	399	0.967	356	0.974
57 PhysicalAppearance	394	0.958	376	0.952	399	0.94	352	0.915
58 Recreation	394	0.956	383	0.956	399	0.935	378	0.926
59 RelationsHusband	393	0.963	393	0.963	395	0.999	385	0.999
60 RelationsNatal	394	0.951	384	0.948	399	0.978	383	0.975
61 Religion	394	0.961	393	0.961	399	0.99	394	0.990
62 Rest	394	0.954	382	0.953	399	0.93	385	0.922
63 RoadsAndTransport	394	0.917	393	0.916	398	0.977	380	0.625
64 SafeWater	394	0.934	383	0.929	399	0.982	381	0.974
65 SalariedJob	394	0.847	341	0.901	399	0.857	325	0.980
66 SavingsHousehold	394	0.908	392	0.909	399	0.923	392	0.909
67 SavingsPersonal	394	0.827	385	0.842	399	0.986	358	0.930
68 SelfEmployment	394	0.928	362	0.946	399	0.725	348	0.764
69 ServicesGovt	394	0.900	391	0.903	399	0.91	390	0.936
70 ServicesHealth	393	0.934	392	0.934	399	0.931	396	0.939
71 ServicesNGO	394	0.924	390	0.926	399	0.963	339	0.963
72 Toilet	394	0.924	383	0.917	399	0.922	384	0.932
73 TrustworthyFriend	394	0.961	382	0.963	399	0.978	326	0.976
74 Vehicle	394	0.542	163	0.723	399	0.963	326	0.965

All correlations significant at the 0.01 level (2-tailed).

Table 33 Correlation between unweighted goal satisfaction scores and, weighted and individualized scores – Algorithm B

	Correlation	Dhaka(urban)				Sylhet (rural)			
		WGS		IGS		WGS		IGS	
	(Sat= 0 to 4, nec =0 to 3	n	r	n	r	n	r	n	r
1	AccessInformation	394	0.947	344	0.996	399	0.942	362	0.842
2	AccessToInfluentials	394	0.997	214	0.988	399	0.889	382	0.885
3	AssistingOthers	394	0.960	351	0.948	399	0.898	345	0.873
4	BeingAtPeace	394	0.885	394	0.885	399	0.907	397	0.906
5	Business	394	0.999	350	0.998	399	0.989	359	0.986
6	Character	394	0.805	381	0.792	399	0.875	395	0.875
7	Children	394	0.940	366	0.943	399	0.914	380	0.923
8	ChildrenAchievements	285	0.915	283	0.912	316	0.940	316	0.940
9	ChildrenBehaviour	309	0.829	303	0.822	318	0.888	313	0.890
10	ChildrenUpbringing	280	0.933	278	0.934	371	0.980	370	0.980
11	Clothing	394	0.904	386	0.900	399	0.844	396	0.844
12	CommunityAssistance	394	0.965	377	0.962	399	0.910	386	0.905
13	CommunityDecisions	394	0.734	237	0.999	399	0.900	374	0.895
14	CommunityDevelopment	394	0.999	141	0.996	399	0.894	379	0.839
15	CommunityFestivals	394	0.859	352	0.862	399	0.871	372	0.863
16	CommunityOrganisations	394	0.999	291	0.999	399	0.955	345	0.942
17	ConvenienceGoods	394	0.991	369	0.989	399	0.951	350	0.945
18	Cooking facilities	394	0.922	384	0.918	.	.	.	.
19	EducationalInstitutes	394	0.878	392	0.878	399	0.960	396	0.960
20	Educationfamily	394	0.974	384	0.973	399	0.976	399	0.976
21	EducationSelf	394	0.979	360	0.976	399	0.945	376	0.942
22	Electricity	394	0.873	392	0.873	399	0.917	386	0.915
23	Equipment	394	0.999	319	0.998	399	0.992	344	0.991
24	FamilyHardworking	394	0.830	391	0.826	399	0.924	396	0.924
25	FamilyObligations	394	0.814	393	0.812	399	0.825	396	0.824
26	FamilyRelations	394	0.874	391	0.873	399	0.921	392	0.921
27	FamilyReputation	394	0.895	393	0.896	399	0.816	395	0.816
28	FamilyRespect	394	0.917	390	0.918	399	0.841	388	0.839
29	FamilyWorkSkills	394	0.998	392	0.878	399	0.978	390	0.958
30	Food	394	0.888	389	0.997	399	0.869	397	0.971
31	FoodProduction	394	0.996	379	0.911	399	0.969	376	0.951
32	Friendships	394	0.963	353	0.840	399	0.946	324	0.892
33	HealthFamilyMembers	394	0.842	393	0.847	399	0.914	394	0.832
34	HealthSelf	394	0.895	393	0.984	399	0.921	399	0.875
35	HouseholdGoods	394	0.941	389	0.898	399	0.884	391	0.817
36	HouseOwnership	394	0.978	393	0.888	399	0.939	393	0.996
37	Housing	394	0.908	391	0.991	399	0.922	396	0.875
38	IncomeHousehold	394	0.909	383	0.959	399	0.961	397	0.939
39	IncomePersonal	394	0.990	368	0.917	399	0.990	337	0.996
40	InLawsDecisions	394	0.963	362	0.928	399	0.858	382	0.961
41	InLawsRespect	394	0.928	378	0.951	397	0.851	386	0.778
42	InLawsSupportHelp	394	0.950	366	0.977	399	0.886	387	0.843
43	KnowledgeAndSkills	394	0.932	345	0.986	399	0.851	364	0.904
44	LandHoldings	394	0.976	388	1.000	399	0.947	394	0.923
45	Leaders	394	0.987	278	0.980	398	0.889	386	0.817
46	Livestock	394	1.000	327	0.773	399	0.987	369	0.991
47	Loans	394	0.978	312	0.757	399	0.941	253	0.937
48	LocalityClean	394	0.868	387	0.742	399	0.828	397	0.741
49	LocalitySafe	394	0.800	364	0.794	399	0.895	387	0.688
50	Markets	394	0.664	389	0.986	399	0.930	387	0.884
51	Marriages	95	0.880	94	0.688	131	0.983	129	0.884
52	NeighbourhoodRelations	394	0.801	384	0.851	399	0.819	394	0.918
53	OccupationalSuccess	394	0.991	366	0.851	399	0.986	305	0.994
54	PersonalRespect	394	0.934	386	0.930	399	0.874	379	0.931
55	PersonalWealth	394	0.998	383	0.721	399	0.956	347	0.487
56	Phone	394	0.895	348	0.658	399	0.893	356	0.789
57	PhysicalAppearance	394	0.920	376	0.489	399	0.736	352	0.357
58	Recreation	394	0.932	383	0.765	399	0.912	378	0.356
59	RelationsHusband	393	0.943	393	0.817	395	0.948	385	0.875
60	RelationsNatal	394	0.919	384	0.487	399	0.853	383	0.323
61	Religion	394	0.956	393	0.921	399	0.921	394	0.457
62	Rest	394	0.891	382	0.879	399	0.876	385	0.859
63	RoadsAndTransport	394	0.875	393	0.561	398	0.920	380	0.829
64	SafeWater	394	0.835	383	0.782	399	0.851	381	0.776
65	SalariedJob	394	0.975	341	0.976	399	0.930	325	0.916
66	SavingsHousehold	394	0.984	392	0.973	399	0.976	392	0.961
67	SavingsPersonal	394	0.972	385	0.975	399	0.983	358	0.977
68	SelfEmployment	394	0.923	362	0.978	399	0.922	348	0.896
69	ServicesGovt	394	0.993	391	0.921	399	0.977	390	0.955
70	ServicesHealth	393	0.921	392	0.909	399	0.948	396	0.778
71	ServicesNGO	394	0.987	390	0.975	399	0.881	339	0.865
72	Toilet	394	0.821	383	0.960	399	0.872	384	0.968
73	TrustworthyFriend	394	0.960	382	0.878	399	0.849	326	0.960
74	Vehicle	394	0.910	163	0.863	399	0.918	326	0.920

All correlations significant at the 0.01 level (2-tailed).

For both algorithms, the weighted and individualized scores for each goal item were positively correlated with the unweighted satisfaction scores. There was variation in the strength of the relationship, although the majority of correlations were greater than.800 ($p<.001$). This is not that surprising considering that it was already evident that satisfaction and importance ratings may be related.

However, the correlations although large and significant are far from perfect, suggesting that including weights and excluding items that are unnecessary to incorporate an individual perspective of quality of life does influence the scores.

6.5.3 DISCUSSION

The main aim of this stage of the analysis was to screen the data in preparation for subsequent deeper analysis and to assess content and face validity of the BGA instrument.

The BGA appears to be readily completed at interview, despite its length. When administered by interview there were no instances of missing responses, except for the items relating to children and marriage[111], which may not yet or may not longer be concerns of the respondents. This indicates that the BGA is acceptable to respondents throughout the target age group (i.e. women age 20 to 45 years), and of varying socio-economic background in both sites. The high completion rates may reflect the way that respondents reacted to the interviewers, whom they regarded as more educated and of higher status. There may also have been an expectation of benefitting from participation, in spite of efforts by the interviewers to emphasise that they were not affiliated with any development organisation.

Based on the frequency analysis and examination of the mean scores of both necessity and satisfaction ratings, the BGA instrument appears to have good content and face validity in relation to the goal item content as well as the response scales. The goal items were relevant to the women in both sites, evidenced by the necessity ratings and high proportions of the items being described as ‘necessary’ or very necessary’ in both sites.

A scan of the frequency distributions of responses to the necessity and satisfaction scales reveals that they encompass the full range of response options, suggesting that they are well understood by the respondents. The range of satisfaction ratings and necessity ratings for the different goal items also suggest that the items are sensitive enough to capture differences between individuals.

[111]The explanation for these missing responses was discussed in section 6.2

Both the necessity scores and the satisfaction scores are useful for making comparisons between individuals or groups, and for tracking changes over time. In this chapter I compared goal satisfaction and goal necessity for the two sites, and identified groups of goals which were prioritised and groups of goals which were more satisfied in each site. As well as items which are equally valued, and equally satisfied.

The necessity ratings show that aspects of life such as family relationships and community involvement, respect and status are in some cases more important than many basic items. These are generally issues that are not addressed by development or government interventions and the BGA would have lacked face validity for some respondents if these items had not been included. There was a great deal of variation in the value placed on certain goods e.g. 11.7% of respondents in the urban site stated that a mobile phone was not at all necessary, while 39.6% of respondents thought it 'very necessary'. Weighting goal satisfaction by the perceived necessity of each item has the potential to capture the unique perspective of each respondent.

There was some indication that necessity and satisfaction scores are related, evidenced by fairly large correlation coefficients between mean necessity and satisfaction scores in both sites. This suggests that necessity weighting of satisfaction scores may not improve measurement of goal satisfaction over that of only using goal satisfaction scores. Necessity weighting of satisfaction scores is complicated by the fact that varying the numbering algorithm of the necessity and satisfaction scales results in very different computed scores. I computed weighted and individualised scores using two different numbering algorithms to compare how variation in the numbering of scales effected the weighted and individualised scores. Both weighted and individualised scores were correlated with unweighted satisfaction scores, although there was variation in the strength of the relationship. This suggest that weighting and individualising does capture the respondent's unique perspective. Whether weighting and individualising satisfaction scores improves the measurement of QoL will be explored further in Chapter 7.

7 FINDINGS: CONSTRUCT VALIDATION OF THE BANGLADESH GOAL ATTAINMENT INSTRUMENT

In this chapter, I continue the validation of the BGA instrument with a focus on evaluating its *construct validity*. The assessment of construct validity, i.e. whether an instrument measures what it purports to measure, is reliant upon statistical procedures. In assessing construct validity of the BGA measure I am considering the validity of inferences about dimensions of perceived QoL, which are unobserved or latent variables, on the basis of observed variables i.e. goal satisfaction ratings.

The statistical analysis reported in this chapter comprises Steps 4, 5 and 6 in the development and validation of the BGA instrument with reference to the schema set out in Table 6 of Chapter 5. The relevant excerpt of the schema is shown in Table 34.

Table 34 Steps 4 to 6 in the development and validation of the BGA instrument.

STEP 4: EXPLORATION OF UNDERLYING THEORETICAL STRUCTURE & MEASURE PURIFICATION
Exploratory factor analysis of the scale data (goal satisfaction and necessity weighted goal scores) is used to reduce items to a smaller number of summary variables or factors. These factors represent the underlying structure of the data; and enable us to determine whether e.g. goal satisfaction is better understood as a single, general, factor; or as consisting of multiple independent dimensions (i.e. subscales).
STEP 5: INTERNAL CONSISTENCY ASSESSMENT
The internal consistency reliabilities for each of the factors, or subscales produced in Step 4 will be assessed using Cronbach's alpha (Price and Mueller, 1986). Cronbach's alpha is a measure of how well the items measure the same construct. Reliability testing is critical for new scale development before attempting to draw inferences based on the subscale scores.
STEP 6. CONSTRUCT VALIDATION
At this point, the subscales should demonstrate content validity (see Step 2) and internal consistency reliability (see Step 5), both of which provide supportive evidence of construct validity. Further evidence for construct validation will be sought by examining the extent to which the subscale scores (mean scores of contributing items) correlate with other measures designed to assess similar constructs[112] (convergent validity), and whether the scores discriminate between different groups (e.g. in terms of various socio-demographic and economic variables).

[112] For quality of life measures such as the BGA instrument establishing convergent validity is a challenging in terms of identifying other QOL measures for comparison.

Referring to Step 4, factor analysis is being conducted using the correlation matrix[113] of goal satisfaction and weighted goal satisfaction scores, to identify *groups of variables* (i.e. goal items) that 'correlate highly with each other, but correlate poorly with variables outside of that group' (Field 2000: 424). In doing this, factor analysis reduces the larger number of variables (i.e. 73 or 74 goal items) to a smaller set of *summary variables* or *factors* which are fairly independent from each other. These summary variables or latent factors, should be made up of coherent groups of goal items reflecting a theoretically valid dimension of perceived QoL.

After factor analysing the goal satisfaction data to identify the number of factors, factor scores are derived for each respondent in the sample. A factor score is a numerical value that indicates the respondent's relative standing on a factor. These scores will be used in further analyses to determine convergent validity and whether the scores discriminate between different groups (known-group validity).

The remainder of the chapter is organized broadly into three sections as follows:

- In section 7.1 I discuss the procedure followed for conducting the factor analysis. Factor analysis is a complex multi-step process, and it is necessary to document the various decisions made during the analysis
- In section 7.2. I present the findings from the construct validation of a *Bangladesh Goal Attainment instrument***,** the data consisting of the urban and rural samples combined**.** Deriving a common structure for the two sites enables me to make comparisons between the two sites. As part of the analysis I continue my evaluation of the usefulness of weighting and individualization of satisfaction scores.
- In section 7.3 I analyze the data from the two sites separately in order to derive and validate an *Urban Goal Attainment instrument* and a *Rural Goal Attainment Instrument*.

[113] The correlation matrix is a table showing the intercorrelations between the variables (e.g. goal satisfaction scores).

7.1 PROCEDURES AND CONSIDERATIONS FOR THE EXPLORATION OF THE UNDERLYING THEORETICAL STRUCTURE OF THE SATISFACTION SCORES , AND MEASURE PURIFICATION

7.1.1 ADEQUACY OF SAMPLE SIZE- REPLACEMENT OF MISSING VALUES

Prior to conducting the factor analysis it is necessary to assess whether the data is suitable in terms of the sample size and the psychometric adequacy of the correlation matrices.

The issue of adequate sample size had already been considered prior to the start of the data collection. There is much debate regarding the minimum requirement for an adequate sample for factor analysis. Several criteria have been suggested in terms of the absolute size of the sample and ratio of variables to cases, or sample to variables (STV). In terms of absolute sample size the recommendations range from an N of 50 (Barrett and Kline, 1981) to 400 (Aleamoni, 1976). Tabachnik and Fidell (2005, p. 640) suggest that 'it is comforting to have at least 300 cases' and Comrey and Lee (1992, p. 217) categorise 300 as a good sample size, 100 as poor and 1000 as excellent. In terms of STV Nunnally (1978) advocates having 10 times as many cases as variables, it has also been suggested that between 5 and 10 cases per variables is adequate up to a total of 300, beyond which it is suggested that the 'test parameters tend to be stable regardless of the case to variable ratio' (Field, 2009, p. 443).

Prior to commencing the data collection, I followed the criteria of having at least 5 cases for each variable. This meant that the required sample for 73 goal items would be 365 cases (and 370 cases for 74 items). This also meant that my sample size in each site fulfilled the criteria of having a minimum of 300 cases as recommended by Tabachnik and Fidell (2005, p. 640).

In Chapter 6 (section 6.2) I reported that there were a small number of goal items that had missing values for the necessity and satisfaction scales as a result of non-responses from respondents for whom the items were not relevant. The items which had missing values were children's achievements, children's behaviour and children's upbringing and 'marriages'.

It was important to retain these items for factor analysis, while also maintaining the size of the sample. In order to do this, it was necessary to replace the missing values prior to conducting the factor analysis. Since the missing values were not random, i.e. they were concentrated in respondents with particular characteristics, mean imputation has been used i.e. replacing the missing observations with the mean of the non-missing observations for that variable (goal item) (Tabachnick and Fidell, 2005). Replacing the missing values with the series mean is inherently problematic, as it reduces the variation in scores and results in inflated high correlations between the variables. The final sample sizes available for factor analysis were 399 in Sylhet (rural) site and 397 for the Dhaka (urban) site.

7.1.2 ASSESSING THE FACTORABILITY OF THE CORRELATION MATRIX

I examined each correlation matrix to ensure that inter-item correlations were substantial i.e. that there were sufficient pairs of variables in the data with adequate levels of intercorrelation (i.e. exceeding.30) (Tabachnick and Fidell, 2005). (The correlation matrices are included in Appendix M for inspection.) I also checked for multicollinearity i.e. for pairs of variables with high correlations (exceeding │.90│). Multicollinearity poses a problem in factor analysis as it becomes difficult to determine the unique contribution of a variable to the factor. If there are any pairs of items with correlations exceeding │.90│ they were noted, with a view to deleting one of the variables (Field, 2009).

I also obtained two tests which are generated in SPSS to assess the suitability of the data for factor analysis (Dziuban and Shirkey, 1974) These tests are the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity (ibid.). The KMO index, which ranges from 0 to 1, is a measure of the degree of correlation between variables and hence the appropriateness of factor analysis (Kaiser 1974). Correlation matrices with KMO exceeding 0.50 are considered suitable for factor analysis. The Bartlett's Test of Sphericity[114] should be significant ($p < .05$) for factor analysis to be suitable. The anti-image matrix (also obtained in SPSS) was also assessed for sufficiently low values, as these represent the component of a variable that cannot be predicted from other variables (Guttman, 1953; Hair and Anderson, 2010).

7.1.3 METHOD OF FACTOR EXTRACTION

There are several methods of factor extraction available in SPSS 23. The most widely recommended are principal axis factoring (PAF) and maximum likelihood (ML). I decided to use the PAF method as it does not impose any distributional assumptions regarding the data and is more suitable for ordinal data[115] (Field 2000). PAF analyses the *shared variance* amongst the items and is appropriate for the theoretical exploration of the underlying factor structure. In other words, it is a more inductive approach which is considered to be more appropriate during the early stages of scale development.

[114] The Bartlett's test of sphericity was used to check the null hypothesis that the variables are uncorrelated in the population. In other words, whether in the population correlation matrix the variable correlates perfectly with itself (r = 1) but has no correlation with the other variables (r = 0).

[115] The other recommended method of factor extraction, maximum likelihood, requires the assumption of multivariate normality. As the weighted goal satisfaction data is non-continuous and ordinal the maximum likelihood method is unsuitable

7.1.4 NUMBER OF FACTORS TO BE EXTRACTED

Determining the number of factors to be extracted is the most important decision when conducting factor analysis. There are several criteria that have been suggested for determining how many factors should be retained (e.g. Field 2000: 436-437; Rietveld & Van Hout 1993: 273-274). The Guttman-Kaiser criterion suggests that only those factors, which explain as much variance as a single variable, which is denoted by an *eigenvalue* of 1, should be retained (Kaiser, 1960). The Guttman-Kaiser criterion has been criticized for resulting in an over-estimation in the number of factors to be extracted (Costelloe and Osbourne, 2005; Field, 2009). I examined the eigenvalues after applying principal axis. In all cases the eigenvalues indicated a large number of factors. For example, the Dhaka goal satisfaction data had 19 factors with eigenvalues greater than 1 which is too many to be useful.

A second criterion involves examining the scree plot (see Figure 7. Example of a scree plot. where the factors are plotted as the X-axis and the corresponding eigenvalues as the Y-axis.

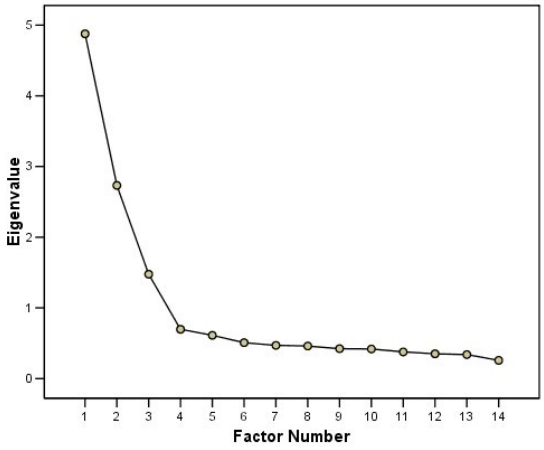

Figure 7. Example of a scree plot.

Examining the graph from left to right, towards later components, the eigenvalues decrease. The number of factors that should be retained are above the point of inflexion i.e. where the drop in eigenvalues ceases and the curve makes an 'elbow' towards a less steep incline. In this case the scree plot suggests a three-factor solution. Interpreting the scree plots was difficult as it was not always possible to identify a clear break or change in slope. In several cases there were two or more apparent breaks. (The scree plots for each of the correlation matrices analysed are included in Appendix N)

I also considered the total amount of variance of the original variables explained by each factor solution. Retaining a greater number of factors means that more of the total variance is explained. There are no clear guidelines regarding the minimum amount of variance that a factor solution should explain, but in the social sciences a minimum of 40% has been

recommended (Hair and Anderson, 2010). I aimed to obtain solutions which explained at least 50% of variance[116].

Deciding upon the number of factors to retain is both a subjective matter as well as a statistical issue. I decided to examine the scree plots and then obtain several solutions varying the numbers of forced factors.

I examined the factor loadings in each solution. Factor loadings are a measure of the relationship of each variable to the underlying factor. Previous studies suggest that a variable should have a rotated factor loading of at least |0.4| onto one of the factors in order to be considered important (Hair and Anderson, 2010) [117]. The solution which provided a structure with fewest multiple loadings (an item loading >.4 on more than one factor) and having most, if not all, items loading onto one of the factors was selected for purification. In addition, each of the factors should have at least three variables with high loadings.

More importantly, I considered the extent to which the emerging factors were meaningful in terms of the constituent goal items making up each factor (Fabrigar et al., 1999). In this case did the goal items making up a factor represent a dimension of QoL that was relevant to women in Bangladesh? If I could readily label each of the factors this was an indication that the factor solution was a reasonable one.

7.1.5 ROTATING FACTORS

Given that the factors retained are greater than one, an initial solution may result in strong correlations of a single variable with several factors or in a variable that does not have strong correlations with any of the factors. Rotating the factors maximizes high loadings and minimizes low loadings, resulting in a more interpretable and simplified solution (Osborne, 2015)

There are several different types of rotation available in SPSS 23, which are categorized as orthogonal or oblique. Orthogonal rotations produce factor structures which are uncorrelated while oblique rotations allow the factors to correlate. Generally, orthogonal rotations are recommended in exploratory studies as they produce more easily interpretable results because the factors are distinct. There are several different orthogonal rotations available in

[116] In the natural sciences, the factoring procedure is usually not stopped until the extracted factors account for at least 95 percent of the variance or until the last factor accounts for only a small portion (less than 5%). In contrast, in the social sciences, where information is often less precise, it is common to consider a solution that accounts for a much lower percent of the total variance as satisfactory (Hair and Anderson, 2010).

[117]. The square of a factor loading indicates the proportion of variance in the variable which is accounted for by the factor. A factor loading of +/-.4 indicates that 16% (.16) of the variance in the variable is accounted for by the factor.

SPSS. I decided to use the varimax rotation which is designed to rotate the extracted factors so that the factor loadings of each variable on a factor are as high or as low as possible (Kim and Mueller, 1978, p. 23).

7.1.6 MEASURE PURIFICATION- REMOVING UNIMPORTANT VARIABLES

In this stage of the analysis variables which did not contribute to the solution were removed one at a time until a final solution was obtained. This entailed repeatedly running the PFA, and examining the factor loadings. Variables which were not loading at least |0.4| on any factor, or were cross loading > |0.4| on two or more factors were identified and removed one at a time and the PFA run again until simple structure was achieved (Thurstone, 1947). Simple structure simply means that each factor should have high loadings, while the remainder of loadings should be very small or close to zero.

The communality of each variable was also considered when deciding whether it should be removed. Communalities represent the proportion of the variance in the original variable that is accounted for by the factor solution. If the communality of a variable is high, the extracted factors account for a big proportion of the variable's variance. This indicates that the variable is reflected well via the extracted factors, and hence that the factor analysis is reliable. Any variables with communalities less than.40 were noted as candidates for removal, as this suggests that it items may not be related to other items in the solution (Stevens, 2001, p. 366).

7.1.7 ASSESSING THE INTERNAL CONSISTENCY ASSESSMENT OF SUBSCALES

Each factor identified in the final factor analysis makes up a subscale of the overall scale, and the items on each subscale are summed to produce a subscale score. Reliability testing is critical for new scale development before attempting to draw inferences based on the subscale scores. A reliability coefficient establishes whether the items that form the subscale consistently reflect the construct that is being measured (Field, 2009).

The internal consistency reliabilities for each of the subscales produced in the factor analysis was assessed using Cronbach's alpha (Price and Mueller, 1986). Cronbach's alpha increases as the intercorrelations among test items increase. Because intercorrelations among test items are maximized when all items measure the same construct, Cronbach's alpha is regarded as an indirect measure of the degree to which a set of items measures a single unidimensional latent construct. The Cronbach's alpha coefficient generally needs to be higher than.7 for a set of items to be considered internally consistent or reliable (Field, 2009). Given the exploratory nature of the analysis, an alpha value of more than.6 was deemed acceptable.

Items which were found to be not contributing to the internal consistency of subscales i.e. items which when removed resulted in an increase in Cronbach's alpha were identified and

considered for removal. These were most often items that were less clearly related to the underlying meaning of the factor.

7.2 CONSTRUCT VALIDATION OF THE BANGLADESH GOAL ATTAINMENT INSTRUMENT

As part of the development and validation of the BGA instrument, it is important to determine whether necessity weighting of satisfactions ratings and individualisation improves the measurement of perceived QoL, above that of using only satisfaction ratings. In Chapter 6, I demonstrated how two different numbering algorithms of the goal satisfaction and goal necessity scales will result in very different weighted goal satisfaction scores. I also determined that the weighted and individualized goal satisfaction scores obtained using both these numbering algorithms, had significant but varying correlations with unweighted goal satisfaction scores. Altogether this suggested that weighting and individualizing of satisfaction scores does alter satisfaction scores, other than inflating them.

I wanted to determine whether the weighting of goal satisfaction scores alters the factor structure of the data, and results in different subscales, from that of the unweighted satisfaction scores.

In the following sections, I will present the results of the factor analysis of the unweighted goal satisfaction scores (UGS) and the weighted goal satisfaction (WGS) scores arising from the two numberings algorithms:

- BWGS-A: satisfaction =1 to 5, necessity = 1 to 4, range of values 0 to 20
- BWGS-B: satisfaction = 0 to 4, necessity = 0 to 3, range of values 0 to 12.

7.2.1 DATA SCREENING

In preparation for factor analysis the correlation matrices (see Appendix M) for the following data (consisting of 73 variables) were examined:

- Bangladesh Unweighted Goal Satisfaction (BUGS) scores
- Bangladesh Weighted Goal Satisfaction (BWGS) scores- Algorithm A
- Bangladesh Weighted Goal Satisfaction (BWGS) scores -Algorithm B

The Kaiser-Meyer-Olkin measure of Sampling Adequacy (KMO) value was greater than.6 and the Bartlett's test of Sphericity was significant ($p<.001$) in all three instances (see Table 35), indicating that factor analysis was appropriate (Hutcheson and Sofroniou, 1999, pp. 224–225). I examined each correlation matrix and concluded that there were sufficient pairs of variables with correlations exceeding.3, and that every single variable had a correlation

with at least one other variable >.3. There were a small number of pairs of highly correlated variables (>.70) within each matrix. However as none of the correlations exceeded.90, I decided not to remove any variables at this stage.

Table 35 Kaiser Meyer Olkin Measure of Sampling Adequacy and Bartlett's Test of Spherecity for Bangladesh data matrices

	KMO statistic	Bartlett's Test of Spherecity		
		Approx Chi Square	df	Sig
Bangladesh Unweighted Goal Satisfaction	.941	32925.917	2628	.000
Bangladesh Weighted Goal Satisfaction-A	.952	36201.487	2850	.000
Bangladesh Weighted Goal Satisfaction-B	.900	10931.046	2628	.000

7.2.2 STRUCTURE AND INTERNAL CONSISTENCY RELIABILITY OF BANGLADESH UNWEIGHTED GOAL SATISFACTION SCORES (BUGS)

PFA of the Bangladesh goal satisfaction data (73 variables) with varimax rotation found 17 factors with Eigenvalues >1, accounting for 54.89% of variance. Seventeen factors are clearly far too many for subscales of QoL. After rotation only ten items loaded onto the first factor suggesting that a single scale is not suitable. The first six factors each had more than five goal items loading >.4, which were items with a common theme suggesting that a six-factor solution was appropriate. I examined the scree-plot and this suggested a five or six factor solution (see Appendix N). I decided to obtain forced five, six and seven factor models and develop them to determine which was the most suitable.

Each solution was examined to determine which provided a structure with fewest multiple loadings (an item loading >.4 on more than one factor) and having most, if not all, the items loading onto one of the components. The initial six-factor solution yielded the cleanest structure, in terms of the fewest cross-loading variables. The solution was also the most satisfactory in terms of the themes and underlying meaning of the group of items making up each factor, indicating that they can be regarded as measuring a distinct underlying dimension of QoL that is meaningful for women in Bangladesh.

Items that fulfilled the criteria of having a primary loading >.40 and secondary loadings <.3 were retained. Goal items that did not meet these criteria were removed one at a time and the analysis re-run repeatedly until a simple structure was achieved. The final six-factor solution shown in Table 36 was reached after the removal of 28 items. It consists of 45 goal items

and explains 50.32% of the total variance. There are a small number of goal items with low communalities (<.3), but these have been retained as they are consistent with the underlying theme of items in the respective subscale[118]. Subscales 4 and 5, while consisting of five or fewer were items are coherent in their item content, and both explain proportions of variance approaching 5%.

To further test the robustness of this six-factor solution I assigned random numbers to each case in the BUGS data file, sorted the cases by the random numbers and split the file into two halves by the median random number. I then replicated the analysis in each split -half i.e. PFA was used to obtain forced six factor solutions with varimax rotation in each split-half. The overall patterns of communalities and factor loadings were successfully replicated in the two split -halves providing evidence for the robustness of the solution.

[118] The solution could be purified further by removing items with low communalities. However, as this is the first validation study of the BGA instrument I have chosen to retain them.

Table 36 Bangladesh unweighted goal satisfaction (BUGS)- PAF six factor solution and internal consistency reliability alpha statistics (45 items)

BUGS	FACTOR LOADINGS	CORRECTED ITEM TOTAL CORRELATION	CRONBACH'S ALPHA IF DELETED	COMMUNALITIES
1 DAILY LIVING CONDITIONS				
1 SMEAN(Clothing)	0.730	0.769	0.910	0.706
2 SMEAN(Toilet)	0.715	0.672	0.912	0.585
3 SMEAN(Food)	0.701	0.739	0.911	0.643
4 SMEAN(HouseholdGoods)	0.688	0.748	0.910	0.613
5 SMEAN(Housing)	0.633	0.645	0.913	0.487
6 SMEAN(SafeWater)	0.626	0.549	0.916	0.417
7 SMEAN(Electricity)	0.542	0.485	0.918	0.315
8 SMEAN(ConvenienceGoods)	0.527	0.647	0.913	0.495
9 SMEAN(LandHoldings)	0.526	0.668	0.912	0.552
10 SMEAN(IncomeHousehold)	0.519	0.571	0.915	0.463
11 SMEAN(Phone)	0.515	0.629	0.914	0.437
12 SMEAN(Recreation)	0.490	0.610	0.914	0.455
13 SMEAN(HouseOwnership)	0.471	0.674	0.912	0.554
14 SMEAN(Rest)	0.445	0.584	0.915	0.468
15 SMEAN(FoodProduction)	0.417	0.507	0.917	0.318
2 COMMUNITY PARTICIPATION & CONNECTIONS				
1 SMEAN(CommunityDevelopment)	0.805	0.842	0.911	0.804
2 SMEAN(CommunityDecisions)	0.802	0.831	0.911	0.770
3 SMEAN(AccessToInfluentials)	0.753	0.794	0.914	0.694
4 SMEAN(CommunityOrganisations)	0.732	0.782	0.914	0.680
5 SMEAN(CommunityFestivals)	0.679	0.748	0.917	0.610
6 SMEAN(Leaders)	0.617	0.723	0.918	0.561
7 SMEAN(CommunityAssistance)	0.542	0.620	0.923	0.426
8 SMEAN(Religion)	0.487	0.611	0.924	0.497
9 SMEAN(AssistingOthers)	0.471	0.586	0.925	0.405
10 SMEAN(LocalityClean)	0.451	0.605	0.924	0.440
3 CLOSE FAMILY RELATIONSHIPS				
1 SMEAN(InLawsRespect)	0.773	0.788	0.844	0.749
2 SMEAN(InLawsDecisions)	0.743	0.741	0.850	0.659
3 SMEAN(InLawsSupportHelp)	0.708	0.718	0.854	0.611
4 SMEAN(RelationsHusband)	0.610	0.645	0.863	0.495
5 SMEAN(FamilyRelations)	0.579	0.657	0.862	0.502
6 SMEAN(FamilyObligations)	0.485	0.597	0.869	0.458
7 SMEAN(BeingAtPeace)	0.438	0.498	0.880	0.385
4 CAPABILITIES OF FAMILY MEMBERS				
1 SMEAN(FamilyWorkSkills)	0.616	0.601	0.680	0.451
2 SMEAN(FamilyHardworking)	0.548	0.572	0.692	0.451
3 SMEAN(Character)	0.501	0.522	0.710	0.486
4 SMEAN(Educationfamily)	0.410	0.454	0.737	0.290
5 WEALTH				
1 SMEAN(SavingsPersonal)	0.682	0.595	0.578	0.534
2 SMEAN(SavingsHousehold)	0.605	0.455	0.635	0.531
3 SMEAN(PersonalWealth)	0.512	0.443	0.640	0.384
4 SMEAN(OccupationalSuccess)	0.441	0.397	0.661	0.232
5 SMEAN(IncomePersonal)	0.407	0.349	0.679	0.211
6 LOCAL SERVICES				
1 SMEAN(ServicesHealth)	0.694	0.600	0.644	0.570
2 SMEAN(ServicesGovt)	0.685	0.638	0.616	0.577
3 SMEAN(EducationalInstitutes)	0.501	0.488	0.705	0.486
4 SMEAN(ServicesNGO)	0.475	0.417	0.745	0.252

	VARIANCE (%)	CRONBACH's ALPHA
1 DAILY LIVING CONDITIONS	13.761	0.919
2 COMMUNITY PARTICIPATION & CONNECTIONS	12.646	0.926
3 CLOSE FAMILY RELATIONSHIPS	9.056	0.878
4 CAPABILITIES OF FAMILY MEMBERS	5.616	0.754
5 WEALTH	4.726	0.689
6 LOCAL SERVICES	4.512	0.745
TOTAL	50.317	

NOTES:

Principal axis factor extraction. Forced 6 factor solution with varimax rotation.

n= 793

Loadings <.40 suppressed

Each of the six factors consists of related items, and reflects an underlying dimension of QoL.The six dimensions of QoL are consistent with my understanding of the context, the circumstances of the sample respondents, and how they evaluate their lives[119]. More importantly, I felt that the factors represented dimensions of QoL which were relevant to women in *both* the sites, regardless of their overall socio-economic background, although the underlying meaning of the dimension may differ.

The labels that I assigned to each subscale are as follows – I also offer a brief explanation of what each of these dimensions means in the two sites:

BUGS1. Daily living conditions.

This 15-item subscale included goals that concern the daily living conditions within the home. The subscale also included household income which will determine the quality of other aspects day-to-day life.

The inclusion of house-ownership and landholdings may appear incongruous. However, these items are key differentiating characteristic of the rural and urban respondents, and reflect the overall economic situation of the household. Being landless (*bhumi-hin*) in rural Bangladesh is a commonly used proxy for poverty. Home ownership in urban Bangladesh is an indicator of economic security. The high cost of land in urban contexts means that home ownership is an aspiration even for middle class households.

BUGS2. Community participation and connections.

The content of this subscale (10 items) is concerned with participation in various aspects of community activities, and connections to persons of influence. In Chapter 2, I discussed how patron-client relationships between richer and poorer households in rural settings determines the access to resources and opportunities.

In Dhaka, almost every slum will have an informal leadership structure, headed by self-appointed political leaders or *mastaans*. These *mastaans* have close relationships to influential government politicians, police and local government authorities (Wood, 1998). As a result they are able to control the access to resources such as water and

[119] I was concerned that items concerning children had not been retained in the final solution. I reran the PFA with forced eight factor solutions. The solution was unsatisfactory overall, although the eight-factor solution did include a factor comprised of three items relating to children (children upbringing, children achievements and children behavior) accounting for less than 2 percent of total variance. The items relating to children had many missing cases which were replaced with the series mean, this would have reduced the variation in the scores and resulted in an inflated correlation between the items.

electricity and play a role in resolving disagreements between slum dwellers (Atkinson-Sheppard, 2017). Altogether their presence and influence creates a culture of patronage within slum societies.

The inclusion of *religion* in this subscale may reflect the fact that certain religious practices are community activities e.g. celebration of festivals, conducting burials and attendance at the weekly prayers. Assisting others is both a religious and social obligation. For instance, it is common practice to distribute charity (*zakat* or *sadaqa*) in the form of food and clothing to poorer members of the community during Ramadhan. The act of assisting others may also be an outward demonstration of a person or household's economic position within the community.

BUGS3. Close family relationships. This subscale concerns various aspects of the quality of the relationships between close family members. For women the quality of these relationships are an experiential source of happiness, a means of securing material benefits for their households, and are also closely related to notions of personal honour and competence (e.g. Camfield et al., 2009; White, 1992). The item being at peace *(mon-ehr shanti*) is commonly spoken about in term of harmonious relationships with close family members

The majority of rural respondents were living within a joint or extended household (*bari*) with other members of their husband's family. I discussed other reasons for the importance of family relationships in the rural site in 6.4.1, in terms of the importance of projecting an image of a cohesive unit to uphold the household's position and influence within the rural society.

In the urban site, the nature of close family relationships is somewhat different. While the majority of urban respondents were living in nuclear households (with their husband, or husband and children), it was not uncommon to find respondents living in close proximity to other members of the extended family (either natal or marital), and families originating from the same district. In the urban context these relationships are particularly significant as they can represent an informal safety net, and a source of information and support for women with limited recourse to other resources (see e.g. Hossain, 2005; Paul, 2006). It was also common to find respondents sharing their home with a person outside of their nuclear family. These were commonly either their own or their husband's mother, or younger sibling, but could also be a more distant relative. Helping a family member, who otherwise would be unable to afford accommodation in Dhaka, represents the fulfilment of a family obligation.

BUGS4. Capacity of family members. The four items making up this subscale relate to the ability of family members to contribute to the household, perhaps in terms of income or in terms of labour, or even guidance.

BUGS5. Wealth. The items making up this subscale relate to the savings of the household and the respondent's own savings, wealth and income flows. The significance of having their own savings, and income sources is that they are able to exercise greater control over how it is used, and in many studies, this is a key indicator of female empowerment.

BUGS6. Local services. The urban site consisting largely of illegal settlements was particularly poorly served in terms of public services, schools and health services. Service provision such as connections to electricity supplies and the quality of internal roads in the rural site also varied.

The internal reliability statistics of all six of the subscales was very good as they exceeded.3. This indicates that the items making up each subscale have good discrimination. In fact, all but three items had inter-item correlations exceeding.4 which indicates very good discrimination. Cronbach's alpha of all six of the subscales was very good (all >.7). Removal of the item being at peace resulted in a very small increase in Cronbach's alpha of the *close family relationships subscale,* which was not deemed to be damaging to the subscale.

The scores were computed for the subscales of the Bangladesh Unweighted Goal Satisfaction (BUGS) by taking the mean of the items contributing to each of the scales. I also computed an overall Mean-BUGS score by taking the mean of the six subscales. Table 37 presents some descriptive statistics for the six subscales and Mean-BUGS. The distribution of scores for each subscale and Mean BUGS of each can also be seen in the histograms in Figure 8.

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Table 37. Descriptive statistics of BUGS scores

BUGS	1. DAILY LIVING CONDITIONS	2. COMMUNITY PARTICIPATION & CONNECTIONS	3. CLOSE FAMILY RELATIONSHIPS	4. CAPABILITIES OF FAMILY MEMBERS	5. WEALTH	6. LOCAL SERVICES	MEAN(BUGS)
Count	793	793	793	793	793	793	793
Mean	1.71	1.49	2.34	2.05	0.63	1.37	1.60
Std. dev.	0.83	0.97	0.88	0.77	0.66	0.83	0.60
Range	3.93	4	4	3.8	3.8	4	3.23
Min.	0.07	0	0	0.2	0	0	0.29
10th percentile	0.73	0.40	1.14	1.20	0.00	0.50	0.89
Median	1.60	1.30	2.43	2.00	0.40	1.25	1.50
90th percentile	2.84	3.00	3.43	3.20	1.60	2.50	2.41
Maximum	4	4	4	4	3.8	4	3.51
Skewness	0.450	0.703	-0.260	0.434	1.470	0.613	0.578
Std. Error of Skewness	0.087	0.087	0.087	0.087	0.087	0.087	0.087
Kurtosis	-0.316	-0.418	-0.470	-0.078	2.409	-0.038	-0.009
Std. Error of Kurtosis	0.173	0.173	0.173	0.173	0.173	0.173	0.173

The range of all the subscales is equal to or approaching 4.0 which is the full range of possible values. The histograms in Figure 8 show the distributions also indicate that each of the subscales discriminates between individuals with low and high levels of satisfaction for the respective dimension of perceived QoL. The scores were positively skewed, for all six subscales, as confirmed by the skew statistics (Table 37) and inspecting the histograms. The mean score for *daily living conditions*, *community participation* and *wealth* were all below the mid-point of the scale (=2). *Wealth* had the lowest mean score, while *Close Family Relationships* had the highest mean score *(M=2.34, SD=.88).*

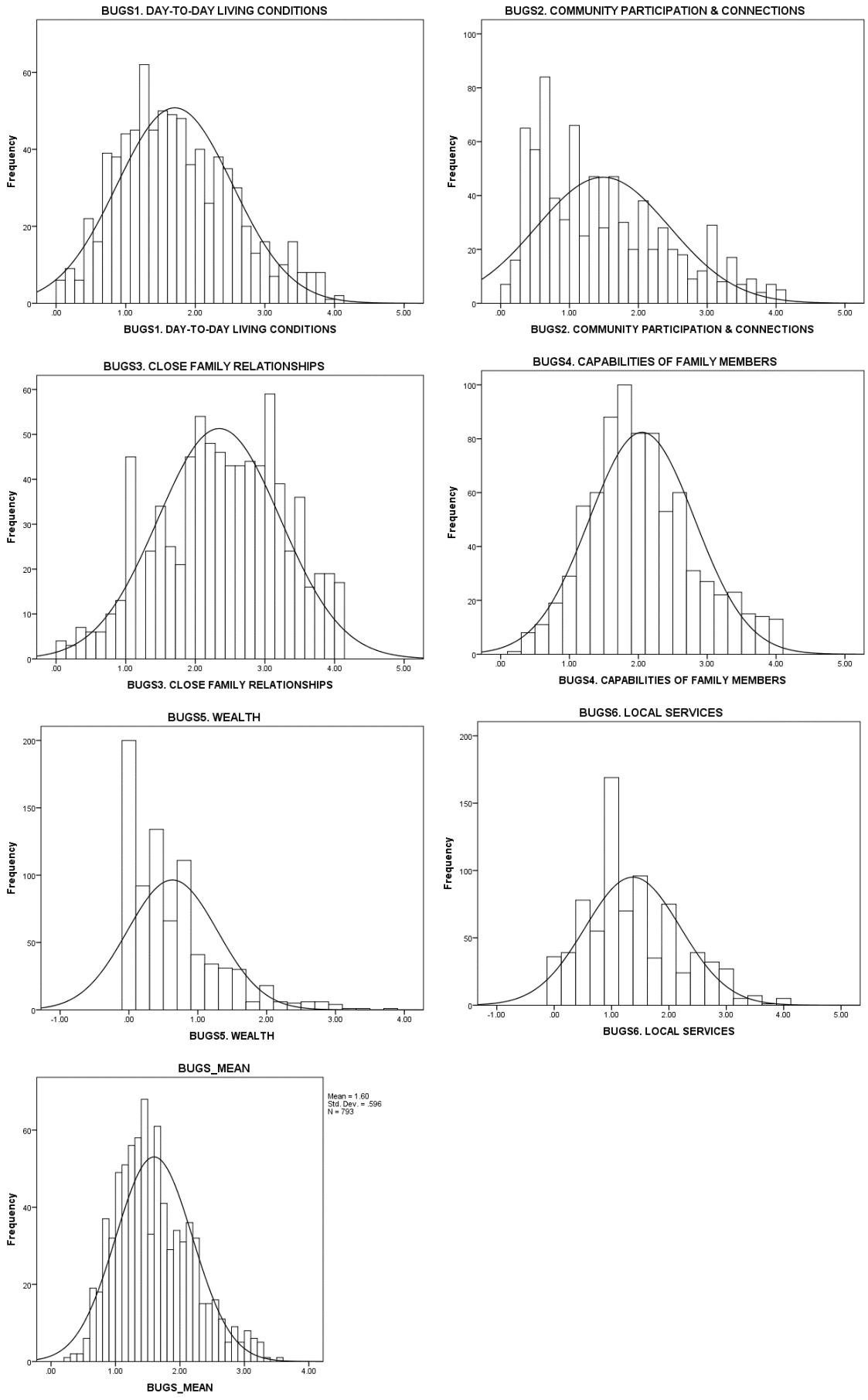

Figure 8 Histograms of BUGS scores

7.2.3 STRUCTURE AND INTERNAL CONSISTENCY RELIABILITY OF THE BANGLADESH WEIGHTED GOAL SATISFACTION (BWGS) SCORES

I conducted PFA of the BWGS-A and BWGS-B data to determine whether the weighting of goal satisfaction scores alters the factor structure of the data, and results in different subscales, from that of the unweighted satisfaction scores.

I will present the findings from the analysis of the BWGS-B data first as the structure obtained was most similar to that of the BUGS scales.

Structure and internal consistency reliability of BWGS -B scales

PFA of the BWGS-B data (73 variables) with varimax rotation found 17 factors with Eigenvalues > 1 accounting for 55.56% of variance. The scree plot (Appendix N) suggested either a five or a six-factor model. I compared initial solutions for forced five and six factor structures. The six-factor solution provided the cleanest structure with the fewest cross-loadings and the most coherent groupings of goal items. I proceeded to develop the forced six factor model further by deleting goal items which did not meet the criteria for inclusion until simple structure was achieved. The final solution shown in Table 38 Bangladesh weighted goal satisfaction (BWGS-B) principal axis factor six factor solution and internal consistency reliability alpha statistics (37 items) was achieved after removing 35 goal items in steps, so that the final six subscales were comprised of 37 items and explained 54.789% of the total variance.

The items making up each subscale are almost identical to that of the BUGS subscales. This meant that I was able to assign them the same labels. The internal reliability statistics of all six of the subscales was also good. Corrected item-total correlations all exceeded.4, and Cronbach's alpha for all six subscales exceeded.7 with all items contributing well to their respective subscales.

Table 38 Bangladesh weighted goal satisfaction (BWGS-B) principal axis factor six factor solution and internal consistency reliability alpha statistics (37 items)

	BWGS-B	FACTOR LOADINGS	CORRECTED ITEM TOTAL CORRELATION	CRONBACH'S ALPHA IF DELETED	COMMUNALITIES
1	**DAILY LIVING CONDITIONS**				
1	WGAToilet_1	0.735	0.726	0.899	0.665
2	WGAClothing_1	0.666	0.752	0.898	0.459
3	WGAFood_1	0.659	0.747	0.898	0.668
4	WGASafeWater_1	0.650	0.590	0.906	0.500
5	WGAHousing_1	0.628	0.688	0.900	0.785
6	WGAHouseholdGoods_1	0.620	0.710	0.900	0.788
7	WGAElectricity_1	0.538	0.534	0.907	0.682
8	WGAConvenienceGoods_1	0.516	0.619	0.904	0.718
9	WGAIncomeHousehold_1	0.502	0.572	0.906	0.435
10	WGAPhone_1	0.498	0.628	0.905	0.480
11	WGAHouseOwnership_1	0.494	0.679	0.901	0.342
12	WGAFoodProduction_1	0.410	0.525	0.908	0.355
2	**COMMUNITY PARTICIPATION & CONNECTIONS**				
1	WGACommunityDevelopment_1	0.793	0.832	0.922	0.461
2	WGACommunityDecisions_1	0.782	0.835	0.922	0.484
3	WGACommunityOrganisations_1	0.736	0.799	0.924	0.576
4	WGAAccessToInfluentials_1	0.718	0.785	0.925	0.666
5	WGACommunityFestivals_1	0.696	0.797	0.924	0.643
6	WGALeaders_1	0.566	0.745	0.927	0.331
7	WGACommunityAssistance_1	0.539	0.683	0.931	0.549
8	WGAAssistingOthers_1	0.507	0.642	0.933	0.555
9	WGALocalityClean_1	0.459	0.667	0.932	0.529
3	**CLOSE FAMILY RELATIONSHIPS**				
1	WGAInLawsRespect_1	0.759	0.800	0.859	0.426
2	WGAInLawsSupportHelp_1	0.748	0.750	0.867	0.663
3	WGAInlawsDecisions_1	0.743	0.743	0.868	0.753
4	WGAFamilyRelations_1	0.642	0.711	0.874	0.662
5	WGARelationsHusband_1	0.606	0.660	0.882	0.601
6	WGAFamilyObligations_1	0.493	0.613	0.888	0.541
4	**LOCAL SERVICES**				
1	WGAServicesGovt_1	0.720	0.626	0.640	0.321
2	WGAServicesHealth_1	0.637	0.624	0.643	0.445
3	WGAServicesNGO_1	0.513	0.410	0.756	0.501
4	WGAEducationalInstitutes_1	0.468	0.519	0.704	0.467
5	**WEALTH**				
1	WGASavingsPersonal_1	0.751	0.619	0.483	0.558
2	WGASavingsHousehold_1	0.673	0.530	0.591	0.587
3	WGAPersonalWealth_1	0.468	0.412	0.723	0.625
4	**CAPABILITIES OF FAMILY MEMBERS**				
1	WGAFamilyWorkSkills_1	0.774	0.612	0.485	0.520
2	WGAFamilyHardworking_1	0.478	0.501	0.627	0.285
3	WGAEducationfamily_1	0.426	0.443	0.701	0.646

		VARIANCE (%)	CRONBACH's ALPHA
1	DAILY LIVING CONDITIONS	14.621	0.910
2	COMMUNITY PARTICIPATION & CONNECTIONS	14.544	0.934
3	CLOSE FAMILY RELATIONSHIPS	10.888	0.826
6	LOCAL SERVICES	5.380	0.748
5	WEALTH	4.767	0.697
6	LOCAL SERVICES	4.588	0.700
	TOTAL	54.789	

NOTES:

Principal axis factor extraction. Forced 6 factor solution with varimax rotation.

n= 793

Loadings <.40 suppressed

I obtained individualized subscale scores, possible range 0 to 12, by excluding the items that had been rated 'not at all necessary' and computing the mean of the remaining items. Descriptive statistics of the BIGS-B subscale scores and histograms are shown in Table 39 and Figure 9.

Table 39 Descriptive statistics of BIGS-B subscale scores

BIGS-B	1. DAILY LIVING CONDITIONS	2. COMMUNITY PARTICIPATION & CONNECTIONS	3. CLOSE FAMILY RELATIONSHIPS	4. CAPABILITIES OF FAMILY MEMBERS	5. WEALTH	6. LOCAL SERVICES	MEAN(BIGS-B)
Count	793	793	793	793	793	793	793
Mean	4.29	3.45	6.14	3.55	1.43	4.89	3.96
Std. dev.	2.43	2.68	2.86	2.32	1.93	2.60	1.83
Range	11.83	12.00	12.00	12.00	12.00	12.00	10.55
Min.	0.17	0.00	0.00	0.00	0.00	0.00	0.51
10th percentile	1.50	0.75	2.50	1.00	0.00	1.96	1.93
Median	3.75	2.75	5.83	3.00	0.67	4.59	3.61
90th percentile	8.00	7.67	10.33	7.00	4.00	8.30	6.46
Maximum	12.00	12.00	12.00	12.00	12.00	12.00	11.06
Skewness	0.771	1.197	0.183	0.878	1.752	0.670	0.891
Std. Error of Skewness	0.087	0.087	0.087	0.087	0.087	0.087	0.087
Kurtosis	0.135	0.898	-0.702	0.687	3.232	0.338	0.553
Std. Error of Kurtosis	0.173	0.173	0.173	0.173	0.173	0.174	0.173

The range of all the subscale scores is equal to or approaching the full range of 12. Similar to the BUGS, the highest mean score was for BIGS-B *Close family relationships* and the lowest for BIGS-B *Wealth.* Only the mean score for *close family relationship scores* (M=6.14, SD= 2.86) is above the midpoint of the scale (=6). The histograms (Figure 9) and skewness statistics (Table 39) indicate that the distribution of the scores for all six-subscales is non-parametric.

Comparing the histograms for BUGS (Figure 8) and BIGS-B subscale scores (Figure 9) suggests that the distribution of scores for each subscale are similar.

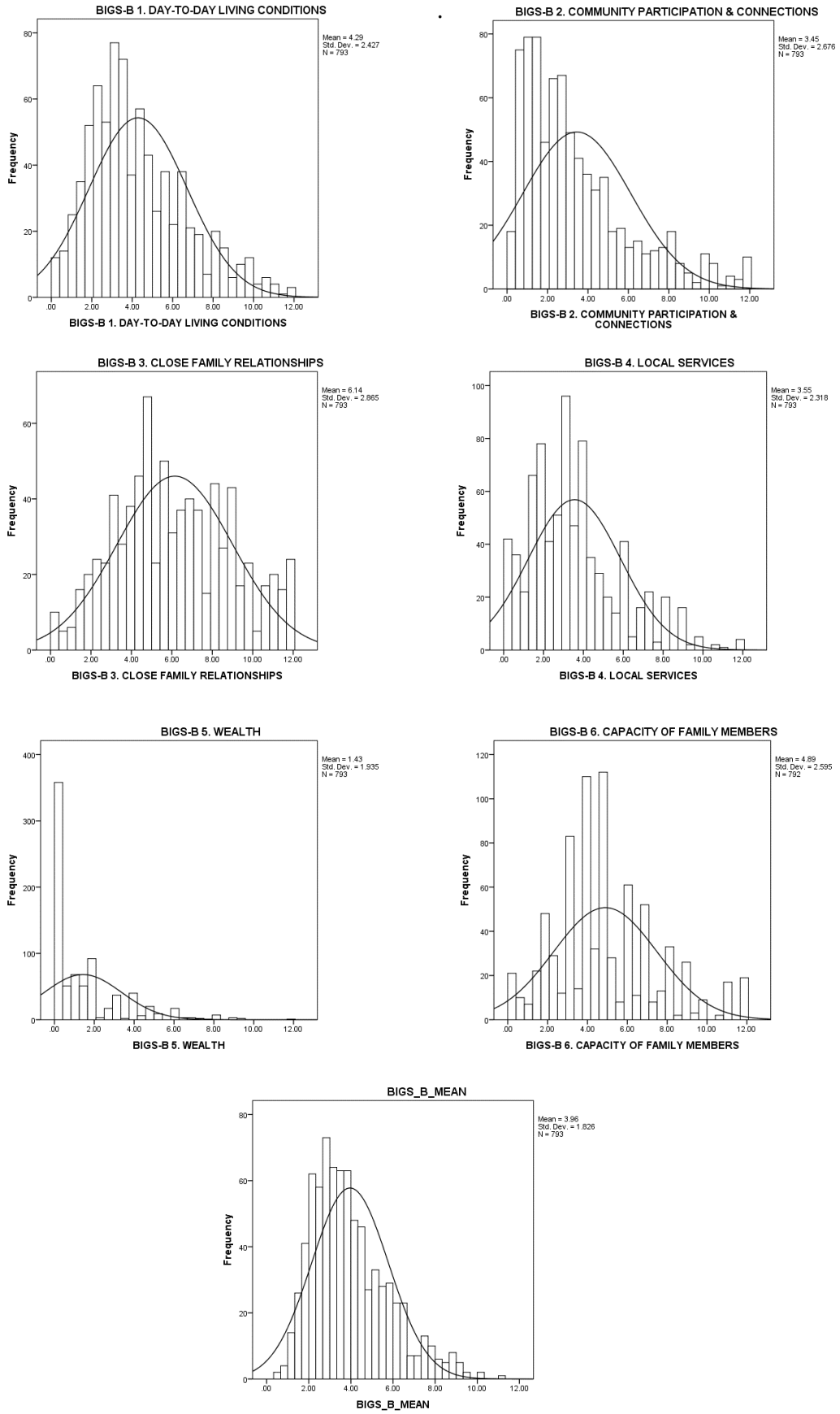

Figure 9 Histograms of BIGS-B scores

Structure and internal consistency reliability of BWGS -A scales

I proceeded to conduct PAF on the BWGS-A data (73 items), the weighted scores obtained using the first numbering algorithm. The scree plot suggested either a 5 or 6 factor solution. I first attempted to replicate the six-factor structure of the BUGS data, by running PAF with a forced six factor solution. A six-factor solution was not suitable, the groupings of variables making up each factor were difficult to label as they consisted of items which were disparate in their meaning. More importantly, the sixth factor only accounted for 2% of variance and consisted of two items. I then ran a PAF with a forced five- factor solution, which produced factors consisting of items with clearer shared meanings. I went onto refine the five-factor solution by removing the items not contributing to the solution. The final five factor solution is shown in Table 40.

Three of the subscales are very similar to BUGS subs-scales, and I was able to assign them the same labels. These were *Day-to-day living conditions, Close family relationships and Local Services*. BWGS-A 1 and 5, although having themes similar to the BUGS *Community participation and connections* and *Wealth* subscales respectively, were somewhat different in their focus. I assigned them different labels as follows:

> ***BWGS-A 1. Community life.*** This subscale of 15 items included items relating to the family's position with the community, participation in various community activities, connections to persons of influence, and some characteristics of the location. Overall the focus of this subscale appears to be broader than the BUGS *Community participation and connections* subscale.
>
> ***BWGS-A 5. Individual wealth and earnings.*** In contrast to the BUGS *Wealth* subscale which had included the wealth of the household as well as the individual, this was narrower in focus, being made up of items which related only to the individual's wealth.

The *Individual Wealth and Earnings* scale was a weak factor, consisting of only 3 items and representing 3.72% of the total variance. This, and the omission of a subscale concerning the capabilities of family suggests that the 5 subscales of the BWGS-B are a poorer representation of the dimensions of QoL which are of relevance to women in Bangladesh.

Table 40 Bangladesh weighted goal satisfaction-BWGS-B. Principal axis factor, forced five-factor solution and internal consistency reliability alpha statistics (39 items)

BWGS-A	FACTOR LOADINGS	CORRECTED ITEM TOTAL CORRELATION	CRONBACH'S ALPHA IF DELETED	COMMUNALITIES
1 COMMUNITY LIFE				
1 NW20FamilyRespect	0.773	0.764	0.942	0.740
2 NW20FamilyReputation	0.756	0.778	0.942	0.780
3 NW20PersonalRespect	0.723	0.762	0.942	0.419
4 NW20CommunityDecisions	0.700	0.782	0.942	0.647
5 NW20CommunityFestivals	0.678	0.705	0.943	0.619
6 NW20CommunityOrganisations	0.677	0.738	0.943	0.425
7 NW20AccessToInfluentials	0.650	0.740	0.943	0.603
8 NW20NeighbourhoodRelations	0.611	0.780	0.942	0.617
9 NW20AssistingOthers	0.592	0.792	0.942	0.712
10 NW20Leaders	0.564	0.739	0.943	0.336
11 NW20CommunityAssistance	0.529	0.691	0.944	0.561
12 NW20Markets	0.473	0.623	0.945	0.483
13 NW20AccessInformation	0.464	0.638	0.945	0.383
14 NW20Character	0.457	0.668	0.944	0.384
15 NW20RoadsAndTransport	0.430	0.657	0.944	0.457
2 DAILY LIVING CONDITIONS				
1 NW20Clothing	0.729	0.701	0.896	0.442
2 NW20Food	0.721	0.760	0.894	0.690
3 NW20Toilet	0.634	0.737	0.895	0.625
4 NW20HouseholdGoods	0.631	0.686	0.896	0.521
5 NW20SafeWater	0.606	0.609	0.899	0.304
6 NW20Electricity	0.568	0.681	0.896	0.643
7 NW20IncomeHousehold	0.566	0.614	0.899	0.524
8 NW20HouseOwnership	0.543	0.500	0.903	0.476
9 NW20ConvenienceGoods	0.514	0.688	0.896	0.538
10 NW20Phone	0.498	0.583	0.901	0.523
3 CLOSE FAMILY RELATIONSHIPS				
1 NW20InLawsRespect	0.752	0.789	0.895	0.680
2 NW20InLawsDecisions	0.751	0.714	0.899	0.575
3 NW20InLawsSupportHelp	0.744	0.731	0.898	0.625
4 NW20FamilyRelations	0.613	0.690	0.900	0.671
5 NW20RelationsHusband	0.599	0.699	0.899	0.509
6 NW20RelationsNatal	0.489	0.665	0.902	0.468
7 NW20FamilyObligations	0.483	0.612	0.904	0.567
4 LOCAL SERVICES				
1 NW20ServicesGovt	0.717	0.656	0.709	0.586
2 NW20ServicesHealth	0.645	0.531	0.772	0.345
3 NW20ServicesNGO	0.631	0.685	0.696	0.317
4 NW20EducationalInstitutes	0.508	0.532	0.772	0.447
5 INDIVIDUAL WEALTH & EARNINGS				
1 NW20OccupationalSuccess	0.688	0.520	0.405	0.689
2 NW20IncomePersonal	0.654	0.324	0.677	0.581
3 NW20SavingsPersonal	0.413	0.487	0.465	0.621
	VARIANCE (%)	ALPHA		
1 COMMUNITY LIFE	18.416	0.948		
2 DAILY LIVING CONDITIONS	14.016	0.908		
3 THE FAMILY	11.219	0.910		
4 LOCAL SERVICES	7.267	0.791		
5 INDIVIDUAL WEALTH & EARNINGS	3.705	0.626		
TOTAL	54.623			

NOTES:

Principal axis factor extraction. Forced 5 factor solution with varimax rotation.

n= 793

Loadings <.40 suppressed

Individualized scores for the five subscales, with a possible range of 0 to 20, were computed as before. Referring to Table 41 there are 25 missing cases for *individual wealth and earnings*. These represent respondents that rated all three items of this scale (*income personal, savings personal, occupational success)* as 'not at all necessary'. This suggests that this subscale represents a dimension of perceived QoL which is not relevant to all women in the target population of the BGA instrument.

The scores for all five subscales are positively skewed, as confirmed by the skewness statistics (Table 41) and the histograms (Figure 10)[120]. I also computed an overall BIGS-A score by taking the mean of the 5 subscale scores.

Table 41 Descriptive statistics of BIGS-A scores

BIGS-A	1. COMMUNITY LIFE	2. DAILY LIVING CONDITIONS	3. CLOSE FAMILY RELATIONSHIPS	4. LOCAL SERVICES	5. INDIVIDUAL WEALTH & EARNINGS	MEAN(BIGS-A)
Count	793	793	793	792	768	793
Missing	0	0	0	1	25	0
Mean	9.36	9.80	12.28	8.47	5.54	9.12
Std. dev.	9.36	9.80	12.28	8.47	5.54	2.62
Range	16.73	17.00	17.17	17.50	18.00	13.66
Min.	3.27	3.00	2.83	2.50	2.00	4.12
10th percentile	5.13	5.78	7.00	4.50	3.00	4.12
Median	8.67	9.10	12.00	7.75	4.67	8.67
90th percentile	14.73	15.16	17.71	14.00	9.33	13.66
Maximum	20.00	20.00	20.00	20.00	20.00	17.79
Skewness	0.865	0.557	0.044	0.892	1.414	0.686
Std. Error of Skewness	0.087	0.087	0.087	0.087	0.088	0.087
Kurtosis	0.299	-0.372	-0.781	0.403	2.577	-0.002
Std. Error of Kurtosis	0.173	0.173	0.174	0.174	0.176	0.173

The range of scores (Table 41) and the histograms (Figure 10) again indicate that each subscale discriminates between individuals with low and high levels of satisfaction. Similar to the BUGS, the highest mean score was for *Close family relationships* and the lowest for BIGS-B *Individual wealth and earnings.*

[120] The histograms and skewness also indicate that the distribution of the scores for all five -subscales and Mean BIGS-A are all non-parametric.

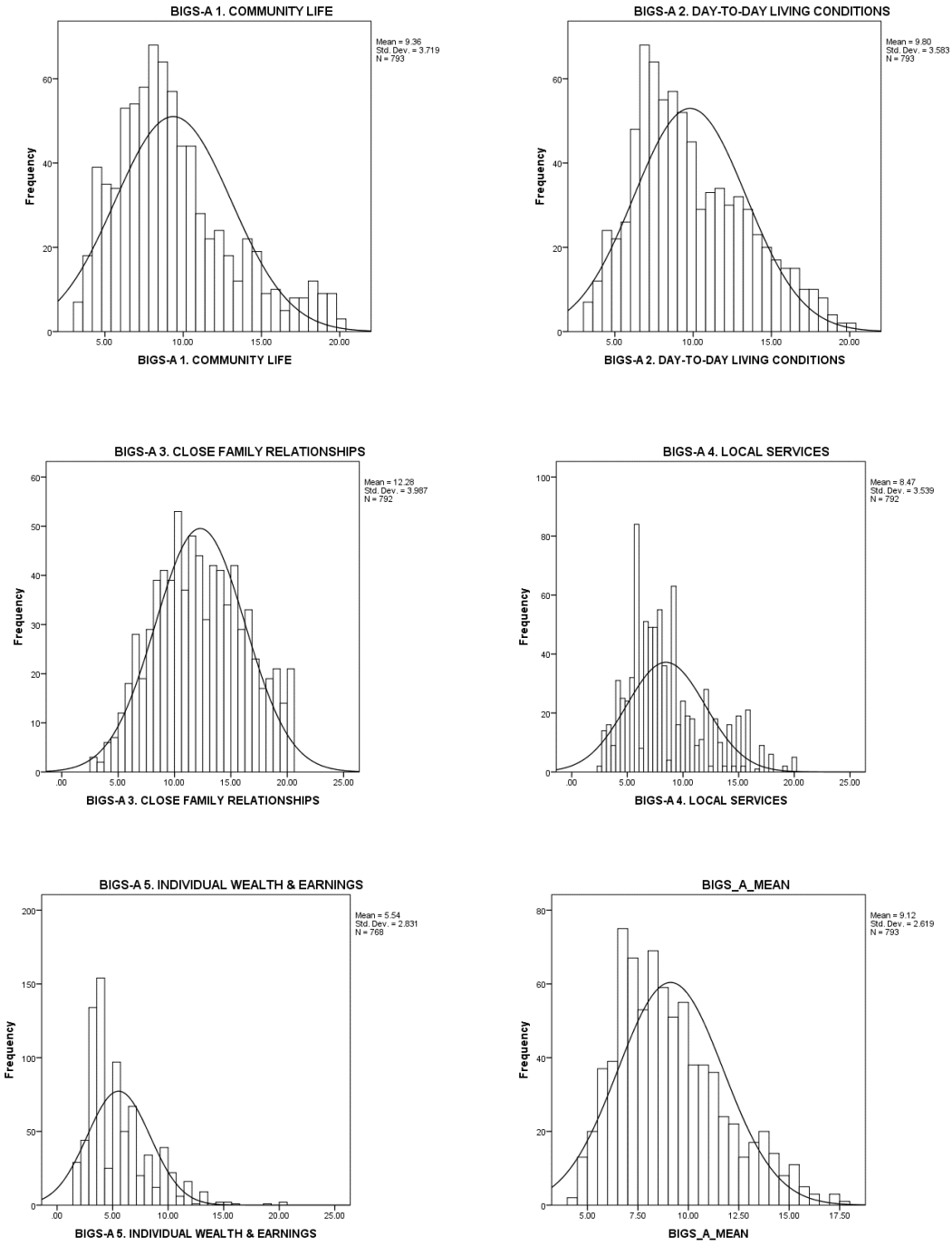

Figure 10 Histograms of BIGS-A scores.

7.2.4 EVALUATING THE IMPACT OF WEIGHTING AND INDIVIDUALIZING THE SUBSCALE SCORES

To further examine how weighting and individualizing impacted upon the subscale scores I examined the correlations between the BUGS and, BWGS and BIGS scores for subscales with similar themes. For instance, I obtained the correlation coefficient between scores for all of the subscales that had been labelled *Day-today living conditions.* The Spearson's Ranked Order correlation coefficient between similarly themed unweighted, and weighted and individualized subscales are shown in Table 42.

Table 42 Correlations between scores on BUGS, and BWGS and BIGS for subscales with related themes

	ALGORITHMN -B		ALGORITHMN -A	
BUGS 1.	DAY-TO-DAY LIVING CONDITIONS		DAY-TO-DAY LIVING CONDITIONS	
DAY-TO-DAY LIVING CONDITIONS	BWGS	BIGS	BWGS	BIGS
	.937*	.930*	.840*	.879*
BUGS 2.	COMMUNITY PARTICIPATION & CONNECTIONS		COMMUNITY LIFE	
COMMUNITY PARTICIPATION & CONNECTIONS	BWGS	BIGS	BWGS	BIGS
	.922*	.911*	.841*	.859*
BUGS 3.	CLOSE FAMILY RELATIONSHIPS		CLOSE FAMILY RELATIONSHIPS	
CLOSE FAMILY RELATIONSHIPS	BWGS	BIGS	BWGS	BIGS
	.899*	.875*	.866*	.841*
BUGS 4.	CAPABILITIES OF FAMILY MEMBERS			
CAPABILITIES OF FAMILY MEMEBRS	BWGS	BIGS		
	0.885*	.884*		
BUGS 5.	WEALTH		INDIVIDUAL WEALTH & EARNINGS	
WEALTH	BWGS	BIGS	BWGS	BIGS
	.814*	.801*	..640*	.657*
BUGS 6.	LOCAL SERVICES		LOCAL SERVICES	
LOCAL SERVICES	BWGS	BIGS	BWGS	BIGS
	.959*	.926*	.876*	873*
*Correlation is significant at the 0.01 level (2-tailed).				

The correlations between similarly themed subscales are all significant and large (exceeding.800 (p.<.001), although not perfect. The only exception was the correlation between BUGS-*Wealth* and BWGS-A and BIGS-A *Individual Wealth,* which were.640 and.657 respectively. This is not surprising as the items making up the BWGS and BIGS-A subscales were confined to the wealth of the individual rather than the wealth of the household including the individual. There was very little difference in the correlations between weighted and individualized scores. Overall, it appears that the two steps of

weighting satisfaction by necessity, and then excluding items that are not relevant to the respondent before computing subscale scores, does alter the scores.

7.2.5 CONVERGENT VALIDITY OF THE BUGS AND BIGS SUBSCALES

Convergent validity, which is an essential component of construct validity, refers to the degree to which two constructs that are theoretically related, are in fact related. Determining the convergent validity of an instrument such as the BGA presents a challenge in terms of identifying another instrument which has a similar underlying conceptualisation of QoL for comparison. The difficulties in identifying a suitable instrument for comparison to the Bangladesh Goal Attainment is an indication that an equivalent instrument does not exist.

As QoL and life satisfaction are described as similar constructs an adaptation of the Satisfaction with Life Scale (SWLS) (Ed Diener, 1984) which has previously been used in Bangladesh was included in the interview schedule for the purposes of examining the BGA's convergent validity.

The SWLS consists of 5-items which address a person's cognitive evaluations of their own life in terms of ideal life, wish for change, and current and past satisfaction.

The back-translation of the adapted SWLS is shown in Table 43[121]. Issues with the fifth item *'If it was possible would you change everything about your life*?' were reported by interviewers during the fieldwork. Although respondents readily responded to the first four items on reaching the fifth item they would often protest that the question was silly as changing everything about your life is not possible. In Sylhet several respondents explained that the overall conditions of a person's life are subject to *Allah's qadr* (Allah's decree). Therefore, expressing that they wanted to change everything about their life would mean not only questioning Allah's decree but would be an expression of *na shukr (*ingratitude*)* and lack of *sabr* (patience)[122].

The issues with item 5 of the SWLS that had emerged during the fieldwork were evident when determining the scale structure of the translated SWLS scale. The five items of the translated SWLS when subjected to PFA (eigenvalues >1) indicated a 5-item single scale explaining 62.73% of the total variance (see Table 43). Four of the five items loaded >.8. The factor loading of item 5 although fulfilling the minimum required loading of >.4, was

[121] The response scale of the Bangla version was reduced to 5 options from 7 as follows:
1-Not at all, 2-A little, 3-more or less/ somewhat, 4- Mostly, 5- Completely

[122] *Sabr* and *shukr*, or patience and gratitude, are considered to be the two fundamental tenets of faith in Islam.

much lower at.412. The overall alpha of the scale was very good (. 813) but deletion of item 5 resulted in an increase in Cronbach's alpha to .889.

Table 43 Scale structure of 5-item Bangla Satisfaction with Life Scale (SWLS)

	ORIGINAL	BACK-TRANSLATION FROM BANGLA	FACTOR LOADINGS	CORRECTED ITEM TOTAL CORRELATION	CRONBACH'S ALPHA IF DELETED	COMMUNALITIES
1	In most ways my life is ideal.	Is your present life close to your ideal life?	0.865	0.720	0.743	0.682
2	The conditions of my life are excellent.	Are the conditions of your life excellent?	0.875	0.719	0.746	0.719
3	I am satisfied with my life.	Are you satisfied with your life?	0.862	0.712	0.746	0.674
4	So far I have gotten the most important things I want in life.	So far have you been able to get the important things that you want in life?	0.838	0.701	0.748	0.603
5	If I could change my life, I would change almost nothing.	If it was possible would you change everything about your life? (*reverse coded*)	0.412	0.296	0.889	0.097
	NOTES:					
	Principal axis factor extraction. Eigenvalues > 1.					
	Variance explained = 62.73%					
	Cronbach's alpha = .813					

Despite the problems with item 5 of the SWLS I felt that the summed scores of the five items would still provide a good measure of a respondent's evaluation of their life satisfaction, and that removal of this was not necessary. Total SWLS scores were computed by summing scores for the five items.

Convergent validity was assessed by examining the correlation of BUGS, BIGS-A and BIGS-B subscale and Mean scores, with the SWLS score. The Spearman's Rank Order (rho) statistics are shown in Table 44.

Table 44 Correlations between Satisfaction with Life Scale (SWLS) scores, and BUGS and BIGS scores.

SPEARMAN'S RANK ORDER (RHO) COEFFICIENT WITH SATISFACTION WITH LIFE SCALE (SWLS SCORES				
		BANGLADESH	URBAN	RURAL
BUGS 1	DAILY LIVING CONDITIONS	.585**	.448**	.594**
BUGS 2	COMMUNITY PARTICIPATION & CONNECTIONS	.426**	.407**	.353**
BUGS 3	CLOSE FAMILY RELATIONSHIPS	.558**	.534**	.509**
BUGS 4	CAPABILITIES OF FAMILY MEMBERS	.351**	.290**	.323**
BUGS 5	WEALTH	.231**	.160**	.283**
BUGS 6	LOCAL SERVICES	.284**	.115*	.288**
MEAN BUGS		.564**	.511**	.528**
BIGS-B 1	DAILY LIVING CONDITIONS	.573**	.427**	.581**
BIGS-B 2	COMMUNITY PARTICIPATION & CONNECTIONS	.387**	.351**	.300**
BIGS-B 3	CLOSE FAMILY RELATIONSHIPS	.467**	.497**	.348**
BIGS-B 4	LOCAL SERVICES	.268**	.154**	.240**
BIGS-B 5	WEALTH	.298**	.222**	.322**
BIGS-B 6	CAPABILITIES OF FAMILY MEMBERS	.320**	.259**	.291**
MEAN BIGS-B		.525**	.504**	.467**
BIGS-A 1	COMMUNITY LIFE	.405**	.401**	.309**
BIGS-A 2	DAILY LIVING CONDITIONS	.567**	.434**	.567**
BIGS-A 3	CLOSE FAMILY RELATIONSHIPS	.456**	.491**	.329**
BIGS-A 4	LOCAL SERVICES	.249**	.142*	.202**
BIGS-A 5	INDIVIDUAL WEALTH & EARNINGS	.057	.085	.065
MEAN BIGS-A		.490**	.478**	.422**
**Correlation is significant at the 0.01 level (2-tailed).				
*Correlation is significant at the 0.05 level (2-tailed).				

Considering the correlations between SWLS scores and the BUGS and BIGS scores for the Bangladesh (urban and rural combined) first, there was a significant positive correlation (p. <.01) between the scores for all the subscales with SWLS scores. The only exception was the correlation with BIGS-B *Individual wealth and earnings,* which suggests that the QoL dimension represented by this subscale is not related to life satisfaction and therefore is not relevant to the construction of women's perceived QoL in Bangladesh. The correlation between SWLS scores and the BIGS-A Community Life scores although significant was also considerably lower than the correlations with the BUGS and BWGS- *Community Participation and Connections* scores. Altogether this suggest that the BIGS-A subscales are a poor representation of the dimensions of perceived QoL for women in Bangladesh.

According to 'bottom-up' theories of subjective-wellbeing self-reports of life satisfaction represent a weighted average of satisfaction with a small number of aspects (domains) of life (Diener, 1984).

Examining the correlations between SWLS scores and the BUGS subscale scores for the urban data suggests that *close family relationships* (r=.534, p<.01), and *daily living conditions* (r=.448, p<.01) are the aspects of life which are most important to the urban respondents when evaluating their global life satisfaction. In the rural site, on the other hand,

daily living conditions (r=.594, p<.01) is the most important dimension, followed *by close family relationships* |(r=.509, p<.01) the second most important. This is consistent with previous findings from around the world where living conditions and the quality of a person's close relationships have been found to be the most important determinants of their life satisfaction.

Wealth had the lowest correlations (.160 and.283 for the urban and rural site respectively). This again can be explained by psychological processes, such as social comparison and adaptation, which influence the relationship between income and life satisfaction (Chapter 4, section 4.3.3)

The correlations between Mean BUGS and Mean BIGS-B scores, which are taken to be a measure of overall QoL, and SWLS scores are all over.500, the only exception being Rural Mean BIGS-B (r=.467, p<.01).

This size of these correlations is as expected; the BUGS scores are comprised of the respondent's level of satisfaction with specific aspects of their lives (unweighted scores), while the BIGS scores incorporate how important each item is to the respondent (weighted scores). Items that are not important are discounted (individualised scores). This is very different from the global perspective of generic measures such as the SWLS, which are more likely to be influenced biases and psychological processes such as cognitive dissonance, mood, social desirability and situational factors (Schwarz and Strack, 1999). (Chapter 3).

7.2.6 DISCRIMINANT VALIDITY OF THE BUGS AND BIGS-B SCALES

Having concluded that the BIGS-A scales are a poor representation of the important dimensions of QoL for women in Bangladesh. I decided to proceed with assessing the discriminant validity of the BUGS and the BIG-B subscales. As the subscales represent the same dimensions of QoL and are labelled identically I will be able to further assess whether weighting and individualising scores improves the measurement of perceived QoL.

The skewness statistics of the BUGS and BIGS-B subscales which were reported in Table 37 and Table 39 indicate that the scale scores are all non-parametric[123], this was also confirmed by the histograms. Accordingly, when examining the differences in mean between groups in this section non-parametric tests have been used.

Differences in mean BUGS and BIGS-B subscale scores, and Mean BUGS and Mean BIGS-B scores, were examined according to various characteristics of the respondents and their

[123] All BUGS and BIGS-B subscales had skewness statistics greater than twice the standard error.

households, using Mann-Whitney U for two sub-groups (such as site), and Kruskal- Wallis (followed by Mann Whitney U) for variables with three or more sub-groups (such as age group of the respondent). In each case, post-hoc comparisons were made only where the initial Kruskal-Wallis test survived the Bonferroni correction of p=.01 for multiple comparison tests and p<.0167 for post hoc tests[124].

Table 45 shows comparisons between sub-groups defined by the respondent's age-group and level of schooling for BUGS and BIGS-B scores.

The overall findings were very similar for the unweighted (BUGS) and individualized (BIGS-B) scores. However, the results need to be interpreted with caution as the site in which respondent lives is a confounding factor for all the predictors considered. Invariably, the urban respondents will be poorer than the rural respondents.

The only subscale which differed between age-groups was *community participation and connections* (both BUGS and BIGS-B) (Table 45). The youngest women (those aged less than 25 years) scored lower than older women (both those aged 25 to 39 years and those aged more than 40 years). Younger women, together with their husbands, in both the sites, are less likely to have the influence or resources necessary to participate in matters of the community or to have significant relationships with persons of influence. Additionally, in both sites, as members of a joint or extended family, the younger women and their husbands would defer to the older members of the family for such matters. Furthermore, this may not be a dimension of QoL that is important to younger respondents.

Scores on the remaining five subscales did not differ by the age group of the respondent. The target respondents of the BGA instrument was married women between the ages 20 and 45 years i.e. women who are of reproductive age, which is a relatively narrow age range. Considering this it may not be that surprising that there were few differences in the subscale scores by age-group. Mean BUGS and Mean BIGS-B scores did not differ by age group of the respondent. On the other hand, the omission of items relating to children from the scales may have meant that some differences in QoL across age groups were not captured by the scales.

Respondents who had not received any schooling had significantly lower scores for *daily living conditions, community participation and connections*, and *close family relationships* (both BUGS and BIGS-B), compared to respondents who had received at least some

[124] The Bonferroni correction is an adjustment made to p values when several statistical tests are being performed simultaneously on a single data set. To determine the Bonferroni correction, I divided the critical p value (α) by the number of comparisons being made. In this case α =.05, and the number of comparisons which will be made is 3 (.01/3= 0.003, this results in a Bonferroni correction of p <.0167).

schooling (primary or less, or above primary). Educational attainment of the respondent is regarded as an indicator of the knowledge and skills that a person has which enhance opportunities of economic participation and social engagement. Particularly in the urban site the educational attainment of the respondent may determine their opportunities for better paid work (e.g. as operators in garments factories). In this case it also serves as an indicator of overall socioeconomic condition. In both sites, the women who have not received any education are likely to be from among the poorest households, which explains their lower scores for subscales *daily living conditions*, and *community participation and connections.* Regarding the lower scores for *close family relationships*, these may be explained, in part, by high rates of conflict within families in Dhaka slums e.g. in one study the prevalence of past-year physical spousal violence in Dhaka slums was reported to be 35% (Sambisa et al., 2011)[125]. In the rural setting poorer women may be more likely to experience low satisfaction with *close family relationships*, as their households are more likely to experience the breakdown of traditional extended family living arrangements and a weakening of the family support system (Amin, 1998).

[125] Multivariate analysis showed that the risk of physical spousal abuse was higher among younger women and those that did not have above primary education

Table 45 BUGS and BIGS-B scores: respondent age and school attainment comparisons[126]

Age of respondent		N	Mean	Std. devn.	p. value of Mann Whitney U for post hoc comparisons	
					25 to 39 years	>=40 years
BUGS-1.DAILY LIVING CONDITIONS						
H= 1.483, d,f,=2	<25 years	209	1.752	0.766		
p.= .477	25 to 39 years	408	1.701	0.839		
	>=40 years	176	1.658	0.885		
BUGS-2. COMMUNITY PARTICIPATION & CONNECTIONS						
H= 15.380, d,f,=2	<25 years	209	1.262	0.878	p. <.001	p.< .001
p. <.001	25 to 39 years	408	1.550	0.979	-	n.s.
	>=40 years	176	1.605	0.996	-	-
BUGS-3. CLOSE FAMILY RELATIONSHIPS						
H=2.129, d,f,=2	<25 years	209	2.389	0.864		
p.= .345	25 to 39 years	408	2.368	0.828		
	>=40 years	176	2.233	1.006		
BUGS6-4. CAPABILITIES OF FAMILY MEMBERS						
H= 1.029, d.f.=2	<25 years	209	2.087	0.720		
p.= 598	25 to 39 years	408	2.038	0.780		
	>=40 years	176	2.049	0.798		
BUGS6-5. WEALTH						
H=2.235,d.f.=2	<25 years	209	0.611	0.665		
p=.311	25 to 39 years	408	0.664	0.675		
	>=40 years	176	0.578	0.597		
BUGS6-6. LOCAL SERVICES						
H=2.522,d.f.=2	<25 years	209	1.300	0.750		
p=.283	25 to 39 years	408	1.418	0.856		
	>=40 years	176	1.344	0.864		
MEAN BUGS						
H=3.850,d.f.=2	<25 years	209	1.554	0.552		
p=.146	25 to 39 years	408	1.636	0.606		
	>=40 years	176	1.561	0.621		

Age of respondent		N	Mean	Std. devn.	p. value of Mann Whitney U for post hoc comparisons	
					25 to 39 years	>=40 years
BIGS-B1.DAILY LIVING CONDITIONS						
H= 1.195, d,f,=2	<25 years	209	4.253	2.307		
p.= .550	25 to 39 years	408	4.3694	2.462		
	>=40 years	176	4.152	2.499		
BIGS-B2. COMMUNITY PARTICIPATION & CONNECTIONS						
H= 14.734, d,f,=2	<25 years	209	2.887	2.436	p. <.001	p. <.001
p. =.001	25 to 39 years	408	3.643	2.702	-	n.s.
	>=40 years	176	3.655	2.816	-	-
BIGS-B3. CLOSE FAMILY RELATIONSHIPS						
H=1.151, d,f,=2	<25 years	209	6.114	2.878		
p.= .562	25 to 39 years	408	6.235	2.785		
	>=40 years	176	5.979	3.042		
BIGS-B4. LOCAL SERVICES						
H= 1.029, d.f.=2	<25 years	209	3.425	2.140		
p.= 598	25 to 39 years	408	3.666	2.435		
	>=40 years	176	3.451	2.250		
BIGS-B5. WEALTH						
H=1.274,d.f.=2	<25 years	209	1.457	1.912		
p=.529	25 to 39 years	408	1.483	1.998		
	>=40 years	176	1.287	1.817		
BIGS-B6.CAPABILITIES OF FAMILY MEMBERS						
H=0.668,d.f.=2	<25 years	209	4.898	2.450		
p=..716	25 to 39 years	408	4.960	2.664		
	>=40 years	176	4.743	2.618		
MEAN BIGS-B						
H=2.786,d.f.=2	<25 years	209	3.839	1.716		
p=.248	25 to 39 years	408	4.059	1.851		
	>=40 years	176	3.876	1.826		

[126] Kruskall-Wallis (H)/ Mann-Whitney U: Bonferroni correction for 3 tests in each block: p<.01 accepted for multiple comparison tests and p<.0167 for post hoc tests.

Educational attainment of respondent		N	Mean	Std. devn.	p. value of Mann Whitney U for post-hoc comparisons	
					Primary or less	*Above primary*
BUGS-1.DAILY LIVING CONDITIONS						
H=27.146, d.f.= 2	None	426	1.571	0.833	**p. <.001**	**p. <.001**
p. <.001	Primary or less	205	1.837	0.811		n.s.
	Above primary	161	1.891	0.793		
BUGS-2. COMMUNITY PARTICIPATION & CONNECTIONS						
H= 32.756, d.f.= 2	None	426	1.318	0.926	**p. <.001**	**p. <.001**
p. <.001	Primary or less	205	1.658	0.963		n.s.
	Above primary	161	1.715	0.995		
BUGS-3. CLOSE FAMILY RELATIONSHIPS						
H=25.751, d.f.= 2	None	426	2.196	0.893	**p. <.001**	**p. <.001**
p. <.001	Primary or less	205	2.539	0.872		n.s
	Above primary	161	2.486	0.791		
BUGS6-4. CAPABILITIES OF FAMILY MEMBERS						
H=6.971, d.f.= 2	None	426	2.003	0.792		
p. <.05	Primary or less	205	2.141	0.773		
	Above primary	161	2.072	0.689		
BUGS6-5. WEALTH						
H=.985, d.f.= 2	None	426	0.605	0.635		
p=.611	Primary or less	205	0.673	0.697		
	Above primary	161	0.644	0.660		
BUGS6-6. LOCAL SERVICES						
H=1.883, d.f.= 2	None	426	1.333	0.849		
p.=.390	Primary or less	205	1.407	0.805		
	Above primary	161	1.421	0.823		
MEAN BUGS						
H=25.155, d.f.= 2	None	426	1.504	0.587	**p. <.001**	**p. <.001**
p. <.001	Primary or less	205	1.709	0.604		n.s.
	Above primary	161	1.704	0.573		

Educational attainment of respondent		N	Mean	td. devı	p. value of Mann Whitney U for post-hoc comparisons	
					Primary or less	*Above primary*
BIGS-B1.DAILY LIVING CONDITIONS						
H=27.022, d.f.= 2	None	426	3.914	2.376	**p. <.001**	**p. <.001**
p. <.001	Primary or less	205	4.669	2.464		n.s.
	Above primary	161	4.802	2.366		
BIGS-B2. COMMUNITY PARTICIPATION & CONNECTIONS						
H= 30.921, d.f.= 2	None	426	3.046	2.582	**p. <.001**	**p. <.001**
p. <.001	Primary or less	205	3.814	2.703		n.s.
	Above primary	161	4.036	2.736		
BIGS-B3. CLOSE FAMILY RELATIONSHIPS						
H=24.776, d.f.= 2	None	426	5.679	2.863	**p. <.001**	**p. <.001**
p. <.001	Primary or less	205	6.772	2.906		n.s
	Above primary	161	6.583	2.609		
BIGS-B4. LOCAL SERVICES						
H=4.051, d.f.= 2	None	426	3.407	2.322		
p.=.132	Primary or less	205	3.706	2.313		
	Above primary	161	3.752	2.308		
BIGS-B5. WEALTH						
H=5.571, d.f.= 2	None	426	1.270	1.766		
p=.062	Primary or less	205	1.595	2.120		
	Above primary	161	1.655	2.088		
BIGS-B6.CAPABILITIES OF FAMILY MEMBERS						
H=6.401, d.f.= 2	None	426	4.740	2.671		
p.=.041	Primary or less	205	5.123	2.531		
	Above primary	161	5.016	2.466		
MEAN BIGS						
H=30.739, d.f.= 2	None	426	3.675	2.671	**p. <.001**	**p. <.001**
p. <.001	Primary or less	205	4.279	2.531		n.s.
	Above primary	161	4.307	2.466		

Table 46 shows comparisons between sub-groups defined by site, household literacy levels, wealth category and the household reliance on the sale of manual labour, a proxy for poverty, - for BUGS and BIGS-B scores. Once again, the overall patterns for BUGS and BIGS-B scores were similar.

Respondents in Sylhet (Table 46), had significantly ($p<.001$) higher scores for all subscales (except for *wealth)*, for both BUGS and BIGS-B. This is as expected bearing in mind that these are two sites with considerable differences in service provision, social structure and the socio-economic characteristics of the respondents.

Overall, as expected, respondents from poorer households had lower scores for all the subscales and mean subscale scores. Respondents from households in which none of the household members could read or write had significantly ($p<.001$) lower scores for all subscales. The households which were richer than average had significantly ($p<.001$) higher scores for all subscales compared to households which were average or poorer than average. Households in which a member worked as a day labourer for more than 100 days per year, had significantly lower scores for all subscales ($p<.001$).

Table 46 BUGS and BIGS-B scores: site, household literacy, household wealth category and household member sells manual labour comparisons[127].

Site		N	Mean	Std. devn.
BUGS-1.DAILY LIVING CONDITIONS				
U=38133.00, d.f.=2	Dhaka (urban)	394	1.325	0.629
p. <.001	Sylhet (rural)	399	2.081	0.834
BUGS-2. COMMUNITY PARTICIPATION & CONNECTIONS				
U= 9245.00, d.f.=2	Dhaka (urban)	394	0.779	0.445
p. <.001	Sylhet (rural)	399	2.185	0.822
BUGS-3. CLOSE FAMILY RELATIONSHIPS				
U=39132.00, d.f.=2	Dhaka (urban)	394	1.964	0.838
p. <.001	Sylhet (rural)	399	2.718	0.754
BUGS-4. CAPABILITIES OF FAMILY MEMBERS				
U=54349.00, d.f.=2	Dhaka (urban)	394	1.846	0.689
p. <.001	Sylhet (rural)	399	2.258	0.788
BUGS6-5. WEALTH				
U=74105.00, d.f.=2	Dhaka (urban)	394	0.608	0.663
p. =.158	Sylhet (rural)	399	0.654	0.649
BUGS6-6. LOCAL SERVICES				
U=59811.00, d.f.=2	Dhaka (urban)	394	1.183	0.718
p. <.001	Sylhet (rural)	399	1.555	0.894
MEAN BUGS				
U=30509.50, d.f.=2	Dhaka (urban)	394	1.284	0.416
p. <.001	Sylhet (rural)	399	1.908	0.585

Site		N	Mean	Std. devn.
BIGS-B1.DAILY LIVING CONDITIONS				
U=32030.5, d.f.=2	Dhaka (urban)	394	3.027	1.513
p. <.001	Sylhet (rural)	399	5.524	2.512
BIGS-B2. COMMUNITY PARTICIPATION & CONNECTIONS				
U= 12659.00, d.f.=2	Dhaka (urban)	394	1.403	0.995
p. <.001	Sylhet (rural)	399	4.996	2.747
BIGS-B3. CLOSE FAMILY RELATIONSHIPS				
U=33586.00, d.f.=2	Dhaka (urban)	394	4.692	2.535
p. <.001	Sylhet (rural)	399	7.496	2.515
BIGS-B4. LOCAL SERVICES				
U=56399.00, d.f.=2	Dhaka (urban)	394	2.823	1.798
p. <.001	Sylhet (rural)	399	4.092	2.622
BIGS-B5. WEALTH				
U=71334.00, d.f.=2	Dhaka (urban)	394	1.248	1.694
p.= .032	Sylhet (rural)	399	1.618	2.088
BIGS-B6.CAPABILITIES OF FAMILY MEMBERS				
U=55873.00, d.f.=2	Dhaka (urban)	394	4.276	2.220
p. <.001	Sylhet (rural)	399	5.528	2.798
MEAN BIGS-B				
U=31341.00, d.f.=2	Dhaka (urban)	394	3.019	1.158
p. <.001	Sylhet (rural)	399	4.888	1.888

Literacy levels of household members. How many household members can read and write?		N	Mean	Std. devn.	p. value of Mann Whitney U for sub-scales	
					Less than half	*None*
BUGS-1.DAILY LIVING CONDITIONS						
H=91.229, d.f.=2	Half or more	208	2.050	0.854	n.s.	p.<.001
p<.001	Less than half	222	1.863	0.832		p.<.001
	None	363	1.411	0.706		
BUGS-2. COMMUNITY PARTICIPATION & CONNECTIONS						
H=48.105, d.f.=2	Half or more	208	1.716	1.035	n.s.	p.<.001
p.<.001	Less than half	222	1.697	0.986		p.<.001
	None	363	1.226	0.842		
BUGS-3. CLOSE FAMILY RELATIONSHIPS						
H= 40.965, d.f.=2	Half or more	208	2.569	0.844	n.s.	p.<.001
p.<.001	Less than half	222	2.486	0.865		p.<.001
	None	363	2.127	0.863		
BUGS6-4. CAPABILITIES OF FAMILY MEMBERS						
H=45.697, d.f.=2	Half or more	208	2.336	0.828	n.s.	p.<.001
p.<.001	Less than half	222	2.083	0.722		p.<.001
	None	363	1.873	0.708		
BUGS6-5. WEALTH						
H=19.849, d.f.=2	Half or more	208	0.805	0.752	n.s.	p.<.001
p.<.001	Less than half	222	0.623	0.636		n.s.
	None	363	0.536	0.587		
BUGS6-6. LOCAL SERVICES						
H=10.851, d.f.=2	Half or more	208	1.446	0.881	n.s.	p.<.001
p.<.005	Less than half	222	1.473	0.805		p.<.001
	None	363	1.265	0.808		
MEAN BUGS						
H=10.851, d.f.=2	Half or more	208	1.820	0.637	n.s.	p.<.001
p.<.005	Less than half	222	1.704	0.593		p.<.001
	None	363	1.406	0.510		

[127] Kruskall-Wallis (H)/ Mann-Whitney U: Bonferroni correction for 3 tests in each block: p<.01 accepted for multiple comparison tests and p<.0167 for post hoc tests.

Literacy levels of household members. How many household memebrs can read and write?		N	Mean	td. devi	p. value of Mann Whitney U for sub-scales	
					Less than half	*None*
BIGS-B1.DAILY LIVING CONDITIONS						
H=70.105, d.f.=2	Half or more	208	5.230	2.598	n.s.	p.<.001
p<.001	Less than half	222	4.634	2.467		p.<.001
	None	363	3.541	2.043		
BIGS-B2. COMMUNITY PARTICIPATION & CONNECTIONS						
H=41.083, d.f.=2	Half or more	208	4.034	2.951	n.s.	p.<.001
p.<.001	Less than half	222	3.933	2.740		p.<.001
	None	363	2.812	2.315		
BIGS-B3. CLOSE FAMILY RELATIONSHIPS						
H= 33.060, d.f.=2	Half or more	208	6.705	2.877	n.s.	p.<.001
p.<.001	Less than half	222	6.685	2.795		p.<.001
	None	363	5.494	2.768		
BIGS-B4. LOCAL SERVICES						
H=9.874, d.f.=2	Half or more	208	3.879	2.524	n.s.	p.<.001
p.<.001	Less than half	222	3.704	2.222		p.<.001
	None	363	3.277	2.224		
BIGS-B5. WEALTH						
H=46.578, d.f.=2	Half or more	208	2.145	2.308	n.s.	p.<.001
p.<.001	Less than half	222	1.433	1.898		n.s.
	None	363	1.023	1.576		
BIGS-B6.CAPABILITIES OF FAMILY MEMBERS						
H=65.197, d.f.=2	Half or more	207	5.987	2.860	n.s.	p.<.001
p.<.005	Less than half	222	5.020	2.468		p.<.001
	None	363	4.196	2.273		
MEAN BIGS-B						
H=690.927, d.f.=2	Half or more	208	4.661	1.996	n.s.	p.<.001
p.<.005	Less than half	222	4.235	1.812		p.<.001
	None	363	3.390	1.534		

Self-rated wealth category		N	Mean	Std. devn.	p. value of Mann Whitney U for sub-scales	
					Average	*Poorer than average*
BUGS-1.DAILY LIVING CONDITIONS						
H=264.752, d.f.=2	Richer than average	154	2.514	0.787	p. <.001	p. <.001
p. <.001	Average	277	1.809	0.673		n.s.
	Poorer than average	355	1.273	0.658		
BUGS-2. COMMUNITY PARTICIPATION & CONNECTIONS						
H=56.042, d.f.=2	Richer than average	154	1.994	1.055	p. <.001	p. <.001
p. <.001	Average	277	1.484	0.925		n.s.
	Poorer than average	355	1.267	0.874		
BUGS-3. CLOSE FAMILY RELATIONSHIPS						
H=79.611, d.f.=2	Richer than average	154	2.690	0.776	p. <.001	p. <.001
p. <.001	Average	277	2.474	0.834		n.s.
	Poorer than average	355	2.092	0.889		
BUGS6-4. CAPABILITIES OF FAMILY MEMBERS						
H=72.295, d.f.=2	Richer than average	154	2.375	0.751	p. <.001	p. <.001
p. <.001	Average	277	2.102	0.715		n.s.
	Poorer than average	355	1.878	0.770		
BUGS6-5. WEALTH						
H=46.045, d.f.=2	Richer than average	154	0.927	0.790	p. <.001	p. <.001
p. <.001	Average	277	0.672	0.653		n.s.
	Poorer than average	355	0.478	0.542		
BUGS6-6. LOCAL SERVICES						
H=17.290, d.f.=2	Richer than average	154	1.591	0.897	p. <.001	p. <.001
p. <.005	Average	277	1.330	0.795		n.s.
	Poorer than average	355	1.316	0.816		
MEAN BUGS						
H=116.920 d.f.=2	Richer than average	154	2.015	0.620	p. <.001	p. <.001
p. <.001	Average	277	1.645	0.545		n.s.
	Poorer than average	355	1.384	0.518		

Self-rated wealth category		N	Mean	Std. devn.	p. value of Mann Whitney U for sub-scales	
					Average	*Poorer than average*
BIGS-B1.DAILY LIVING CONDITIONS						
H=183.679, d.f.=2	Richer than average	154	6.446	2.629	p. <.001	p. <.001
p. <.001	Average	277	4.522	2.064		n.s.
	Poorer than average	355	3.174	1.864		
BIGS-B2. COMMUNITY PARTICIPATION & CONNECTIONS						
H=52.743, d.f.=2	Richer than average	154	4.693	3.101	p. <.001	p. <.001
p. <.001	Average	277	3.528	2.582		n.s.
	Poorer than average	355	2.838	2.347		
BIGS-B3. CLOSE FAMILY RELATIONSHIPS						
H=32.277, d.f.=2	Richer than average	154	6.978	2.740	p. <.001	p. <.001
p. <.001	Average	277	6.509	2.838		n.s.
	Poorer than average	355	5.500	2.811		
BIGS-B4. LOCAL SERVICES						
H=90795, d.f.=2	Richer than average	154	6.978	2.740	p. <.001	p. <.001
p. <.01	Average	277	6.509	2.838		n.s.
	Poorer than average	355	5.500	2.811		
BIGS-B5. WEALTH						
H=46.045, d.f.=2	Richer than average	154	2.710	2.390	p. <.001	p. <.001
p. <.001	Average	277	1.587	1.869		n.s.
	Poorer than average	355	0.782	1.411		
BIGS-B6.CAPABILITIES OF FAMILY MEMBERS						
H=72.772, d.f.=2	Richer than average	153	6.049	2.476	p. <.001	p. <.001
p. <.001	Average	277	5.143	2.543		n.s.
	Poorer than average	355	4.199	2.498		
MEAN BIGS						
H=113.476, d.f.=2	Richer than average	154	5.175	2.034	p. <.001	p. <.001
p. <.001	Average	277	4.129	1.675		n.s.
	Poorer than average	355	3.309	1.530		

Household member sells manual labour > 100 days per year		N	Mean	Std. devn.
BUGS-1.DAILY LIVING CONDITIONS				
U=32949.5, d.f.= 2	Yes	495	1.406	0.692
p. <.001	No	291	2.204	0.804
BUGS-2. COMMUNITY PARTICIPATION & CONNECTIONS				
U= 14983.500, d.f.= 2	Yes	495	0.999	0.690
p. <.001	No	291	2.303	0.801
BUGS-3. CLOSE FAMILY RELATIONSHIPS				
U=14983.5, d.f.= 2	Yes	495	2.076	0.841
p. <.001	No	291	2.788	0.765
BUGS6-4. CAPABILITIES OF FAMILY MEMBERS				
U=37914, d.f.= 2	Yes	495	1.895	0.718
p. <.001	No	291	2.316	0.777
BUGS6-5. WEALTH				
U=61224, d.f.= 2	Yes	495	0.571	0.628
p. <.001	No	291	0.732	0.691
BUGS6-6. LOCAL SERVICES				
U=51726, d.f.= 2	Yes	495	1.216	0.765
p. <.001	No	291	1.637	0.879
MEAN BUGS				
U=28056.50, d.f.= 2	Yes	495	1.361	0.469
p. <.001	No	291	1.997	0.579

Household member sells manual labour > 100 days per year		N	Mean	Std. devn.
BIGS-B1.DAILY LIVING CONDITIONS				
U=29450.0, d.f.= 2	Yes	495	3.353	1.864
p. <.001	No	291	5.848	2.459
BIGS-B2. COMMUNITY PARTICIPATION & CONNECTIONS				
U= 22073.50, d.f.= 2	Yes	495	2.292	1.843
p. <.001	No	291	5.370	2.752
BIGS-B3. CLOSE FAMILY RELATIONSHIPS				
U=36523.50, d.f.= 2	Yes	495	5.230	2.635
p. <.001	No	291	7.675	2.590
BIGS-B4. LOCAL SERVICES				
U=50881.0, d.f.= 2	Yes	495	3.094	1.996
p. <.001	No	291	4.356	2.604
BIGS-B5. WEALTH				
U=59412.0, d.f.= 2	Yes	495	1.182	1.678
p. <.001	No	291	1.848	2.244
BIGS-B6.CAPABILITIES OF FAMILY MEMBERS				
U=500.60, d.f.= 2	Yes	494	4.400	2.343
p. <.001	No	291	5.717	2.786
MEAN BIGS				
U=29535.50, d.f.= 2	Yes	495	3.258	1.371
p. <.001	No	291	5.135	1.895

Two multiple linear regressions were conducted: the first with Mean BUGS scores as the independent variable and the second with Mean BIGS-B. In each case the characteristics that had been found to be significantly related to scale scores in the univariate analyses above (Table 45 and Table 46) were entered as a block, since there was no prior justification for the relative importance of the various predictors. The independent predictors were respondents schooling (some/ none), site (urban/rural), household wealth category (richer than average/ average and poorer than average), household member sells daily labour for more than 100 days per annum (yes/no) and literacy of household members (some can read, and write/ none can read and write). I decided to also include respondent age (dichotomized as less than 25 years/ 25 years and above) as this had been where the significant differences had arisen.

Table 47 shows the unstandardized regression coefficients (B) and their standard error (SE B), as well as standardized (Beta) regression coefficients and collinearity statistics. For both BUGS and BIGS-B, the independent predictors entered were identical and examination of correlations between predictor variables revealed that none of these exceeded.7. Collinearity tolerance values were all >.01 and VIF values were <10, indicating that there was no collinearity between the predictor variables and so all could be included in the subsequent analyses (Field, 2009)

The first model predicting Mean BUGS scores had better predictive value than that of predicting Mean BIGS-B scores (R^2=.393 for Mean BUGS compared with R^2=.375 for Mean BIGS-B). Only household level variables which indicated the socio-economic condition of the household were significant predictors. In both cases higher quality of life, measured by Mean BUGS and Mean BIGS-B scores, was predicted by living in the rural site, being part of a household where at least some of the household members could read and write, being part of a household which was rated as 'richer 'than others, and one in which no members sold manual labour. The respondents level of schooling education did not predict Mean BUGS or Mean BIGS scores. This suggests that it is the household's overall socioeconomic position which determines satisfaction with the various dimensions of QoL for women.

Table 47 Summary of regression analysis for variables predicting MEAN BUGS and Mean BIGS-B scores

MODEL		Unstandardised		Standardised			Collinearity statistics	
		Beta	Std. error	coefficients	t	Sig.	Tolerance	VIF
MEAN BUGS	(Constant)	0.823	0.065		12.731	0.000		
Adjusted R^2 0.393	**REG_WEALTH_CATEG**	0.272	0.035	0.227	7.760	**0.000**	0.902	1.109
F (5,785)= 96.688, p<.000	**REG_ED_HHMEM**	0.175	0.035	0.146	4.970	**0.000**	0.889	1.125
	REG_RESP_EDUC	0.037	0.034	0.031	1.070	0.285	0.937	1.067
	REG_SITE	0.407	0.052	0.342	7.838	**0.000**	0.407	2.460
	REG_MANLABOUR	0.220	0.055	0.179	4.041	**0.000**	0.393	2.542
MEAN BIGS-B	(Constant)	1.704	0.201		8.492	0.000		
Adjusted R^2 0.375	**REG_WEALTH_CATEG**	0.842	0.109	0.230	7.733	**0.000**	0.902	1.109
F (5,786)= 70.855, p<.000	**REG_ED_HHMEM**	0.511	0.109	0.140	4.671	**0.000**	0.889	1.125
	REG_RESP_EDUC	0.119	0.107	0.032	1.115	0.265	0.937	1.067
	REG_SITE	1.271	0.161	0.348	7.879	**0.000**	0.407	2.460
	REG_MANLABOUR	0.590	0.169	0.157	3.484	**0.001**	0.393	2.542

As the two sites are very different in terms of the socio- economic characteristics of the population I wanted to test whether the predictors would be the same in the two sites. I tested this by running the regression for the data of the two sites separately for Mean BUGS scores. The models for the two sites were similar in terms of predictive value (R^2=.165 in Dhaka and R^2=.168 in Sylhet, shown in Table 48), but predictive value was much lower than for the regression using the Bangladesh data. In the urban site *wealth category* and *household members literacy* were the significant predictors of Mean BUGS scores. In the rural site Mean BUGS had the same predictors, with the addition of *household members sells manual labour.* This is understandable because 100% of households in the urban site had members selling manual labour. The corresponding figure for Sylhet 25.80%, and these represent the poorest households within the site.

Table 48 Summary of regression analysis for variables predicting MEAN BUGS in the two sites

MODEL		Unstandardised coefficients		Standardised coefficients			Collinearity statistics	
		Beta	Std. error	beta	t	Sig.	Tolerance	VIF
DHAKA -MEAN BUGS	(Constant)	0.404	0.389		1.038	0.300		
R^2 0.165	**REG_WEALTH_CATEG**	0.267	0.04	0.321	6.645	**0.000**	0.92	1.087
F (5,388)= 15.318, p<.000	**REG_ED_HHMEM**	0.13	0.041	0.156	3.17	**0.002**	0.892	1.121
	REG_RESP_AGE	0.002	0.043	0.002	0.044	0.965	0.932	1.073
	REG_RESP_EDUC	0.045	0.042	0.052	1.066	0.287	0.91	1.099
	REG_MANLABOUR	0.662	0.386	0.08	1.717	0.087	0.988	1.013
SYLHET - MEAN BUGS	(Constant)	1.232	0.122		10.143	0.000		
R^2 0.168	**REG_WEALTH_CATEG**	0.278	0.059	0.234	4.742	**0.000**	0.869	1.151
F (5,393)= 15.913, p<.000	**REG_ED_HHMEM**	0.225	0.058	0.187	3.856	**0.000**	0.899	1.112
	REG_RESP_AGE	0.001	0.067	0.001	0.019	0.985	0.99	1.01
	REG_RESP_EDUC	0.037	0.055	0.031	0.674	0.500	0.989	1.012
	REG_MANLABOUR	0.202	0.065	0.151	3.113	**0.002**	0.903	1.108

7.2.7 DISCUSSION

In this section I presented the findings from the exploration of the underlying theoretical structure of the satisfaction data for the Bangladesh data.

Conducting PAF on the unweighted goal satisfaction scores I identified a six-factor solution, consisting of 45 items, which I labelled as follows: *Close family relationships, Community participation and connections, wealth, Daily living conditions, Local services and*

Capabilities of family members. I believe these six factors represent dimensions of QoL which are relevant to women in *both* the sites, regardless of their overall socio-economic background.

Individualized measures assume that quality of life is determined by the gap between people's expectations and experiences, but acknowledge that items are not equally valued. Taking account of the individual's perspective by incorporating importance ratings into QoL measurement makes intuitive sense, even though it requires greater time and resources. However, the findings presented here suggest that the process of weighting and individualization to compute scores did not improve the measurement of QoL using the BGA. An added complication is the variation in computed scores depending on the numbering algorithm of the response scales. I ran PAF on weighted satisfaction scores obtained using two different numbering algorithms: BWGS-A and BWGS-B[128]. An almost identical structure was obtained when PAF was conducted on BWGS-B. The structure obtained using the other scaling option BWGS-A was an inadequate representation of important dimensions of QoL.

In further analysis the unweighted and individualized scores, BUGS and BIGS-B, also produced very similar results. BUGS and BIGS-B subscale, and Mean BUGS and Mean BIGS-B scores differed in similar ways between groups defined in terms of the respondent and their household's characteristics. In multiple regression both Mean BUGS and Mean BIGS-B scores were influenced by the same predictors.

Although importance ratings may not improve the accuracy of the measurement of QoL, they are valuable as an aid to programme designers and policy makers. The two-scale design of the BGA instrument may be more resource intensive to administer, but it provides a level of detail regarding respondents' goal attainment and goal priorities which is comparable to more resource intensive approaches such as semi-structured interviews.

A major shortcoming of the BUGS model is that items related to children (*children, children's behavior, children's upbringing, and children's achievements*) were not retained in any of the final subscales. The omission of this group of items is a concern. Having children and bringing them up well, and their achievements are undoubtedly an important aspect of women's lives. It may be possible to address this problem by wording the items

[128] BWGS-A: satisfaction =1 to 5, necessity = 1 to 4, range of values 0 to 20; and BWGS-B: satisfaction = 0 to 4, necessity = 0 to 3, range of values 0 to 12.

relating to children in *capacity* terms (as discussed in 5.2.1)[129] to reduce the number of missing responses. Another approach would be to develop a standalone subscale which could be administered only to those women who have children, and whose children are old enough for their achievements etc. to be considered.

7.3 CONSTRUCT VALIDATION OF RURAL AND URBAN GOAL ATTAINMENT INSTRUMENTS

In the previous section I conducted validation of a Bangladesh Goal Attainment instrument: BUGS, which was comprised of 6 subscales which I felt represented important dimensions of QoL which were relevant to the women *in both the study sites.* The BUGS subscales produce satisfactory scores for important dimensions of QoL, enabling comparisons to be made between the rural and the urban site, and respondents within each site.

The sites differ considerably in terms of the context, social structure and the circumstances of the women making up each sample. In Chapter 6 I was able to identify broad patterns of differences in the satisfaction and importance of goals between the two sites. I wanted to explore whether factor analysis of the rural and urban data separately would reveal dimensions of QoL which are specific to the sites[130]. I also wanted to determine whether the development of location-specific instruments, e.g. with factors reflecting dimensions of QoL pertinent to the site will improve the measurement of QoL within the sites.

7.3.1 DATA SCREENING

The correlation matrices for unweighted goal satisfaction for the two sites were screened to confirm that the data was suitable for factor analysis (see Appendix M). The rural data consisted of 73 variables. The urban data consisted of 74 variables, due to the addition of the item *cooking facilities*.

The Kaiser_Meyer-Olkin Measure of Sampling Adequacy (KMO) value was greater than.60 the Bartlett's test of Sphericity was significant ($p < .001$) for both data sets (Table 49),

[129] Capacity wording ('can do,' 'could do') vs. performance ('did do', 'do do'); phrasing questions using capacity wording allows individuals to provide a hypothetical response for items which may not be relevant to them (Hudak, Amadio et al. 1996).

[130] This was confirmed when the PFA solutions obtained for the Bangladesh data were again tested to see whether they were applicable to the urban and rural data i.e. by attempting to replicate the results obtained for the Bangladesh data in the urban and rural data (the rationale and procedure being identical to the split half cross validation described previously). I was unable to replicate the result. This indicates that the structures of the Bangladesh data (in terms of the factor loadings and communalities) were not generalizable to the urban and rural data sets, indicating that the two sites will have different latent dimensions.

indicating that factor analysis was appropriate (Hutcheson and Sofroniou, 1999, pp. 224–225). There were sufficient pairs of variables with correlations exceeding.3, and every single variable had a correlation with at least one other variable >.3. There were a small number of pairs of highly correlated variables within each matrix, however as none of these exceeded.9 they were retained for the analysis.

Table 49 Kaiser Meyer Olkin Measure of Sampling Adequacy and Bartlett's Test of Spherecity for urban and rural data matrices

	KMO statistic	Bartlett's Test of Spherecity		
		Approx Chi Square	df	Sig
Urban Unweighted Goal Satisfaction (DUGS)	.851	7190.075	465	.000
Rural Unweighted Goal Satisfaction (RUGS)	.928	9778.029	1035	000

7.3.2 DHAKA (URBAN) UNWEIGHTED GOAL SATISFACTION (DUGS) - STRUCTURE AND INTERNAL CONSISTENCY RELIABILITY ASSESSMENT

PFA of the Dhaka goal satisfaction data (74 variables) with varimax rotation found 18 factors with Eigenvalues >1, accounting for 58.13% of the total variance. After examining the scree plot (see Appendix N) I ran PAF seeking forced five and six factor solutions and examined the solutions. The five-factor solution was more coherent in term of the groupings of items within factors and I went on to develop it until I reached the simple structure shown in Table 50. The final solution consists of 31 items and explains 52.8% of the total variance.

Table 50 Urban unweighted goal satisfaction (DUGS). Principal axis factor, forced five- factor solution and internal consistency reliability alpha statistics (41 items)

DUGS	FACTOR LOADINGS	CORRECTED ITEM TOTAL CORRELATION	CRONBACH'S ALPHA IF DELETED	COMMUNALITIES
1 CLOSE FAMILY RELATIONSHIPS				
1 SMEAN(InLawsRespect)	0.855	0.782	0.837	0.751
2 SMEAN(InLawsDecisions)	0.845	0.734	0.843	0.741
3 SMEAN(InLawsSupportHelp)	0.780	0.692	0.848	0.661
4 SMEAN(RelationsHusband)	0.647	0.645	0.854	0.506
5 SMEAN(FamilyRelations)	0.623	0.631	0.855	0.522
6 SMEAN(BeingAtPeace)	0.489	0.517	0.866	0.358
7 SMEAN(FamilyObligations)	0.486	0.519	0.866	0.349
8 SMEAN(PhysicalAppearance)	0.467	0.494	0.868	0.305
2 FAMILY RESPECT & HONOUR				
1 SMEAN(FamilyRespect)	0.876	0.872	0.786	0.873
2 SMEAN(FamilyReputation)	0.855	0.835	0.803	0.820
3 SMEAN(PersonalRespect)	0.781	0.795	0.809	0.699
4 SMEAN(Character)	0.502	0.492	0.880	0.373
5 SMEAN(AssistingOthers)	0.436	0.478	0.885	0.394
3 DAILY LIVING CONDITIONS				
1 SMEAN(Toilet)	0.842	0.785	0.815	0.749
2 SMEAN(SafeWater)	0.804	0.729	0.825	0.705
3 SMEAN(CookingFacilities)	0.687	0.659	0.838	0.516
4 SMEAN(Electricity)	0.673	0.633	0.843	0.475
5 SMEAN(Housing)	0.563	0.557	0.856	0.393
6 SMEAN(HouseholdGoods)	0.530	0.577	0.853	0.530
4 WEALTH				
1 SMEAN(SavingsHousehold)	0.760	0.669	0.780	0.649
2 SMEAN(SavingsPersonal)	0.755	0.576	0.800	0.580
3 SMEAN(LandHoldings)	0.634	0.703	0.770	0.545
4 SMEAN(PersonalWealth)	0.532	0.466	0.820	0.306
5 SMEAN(HouseOwnership)	0.529	0.610	0.792	0.415
6 SMEAN(IncomeHousehold)	0.529	0.538	0.808	0.450
5 COMMUNITY PARTICIPATION & CONNECTIONS				
1 SMEAN(CommunityDevelopment)	0.851	0.660	0.700	0.739
2 SMEAN(CommunityDecisions)	0.736	0.570	0.720	0.560
3 SMEAN(CommunityOrganisations)	0.610	0.560	0.717	0.405
4 SMEAN(AccessToInfluentials)	0.520	0.518	0.725	0.327
5 SMEAN(Leaders)	0.451	0.458	0.759	0.314
6 SMEAN(CommunityFestivals)	0.415	0.415	0.751	0.329

	VARIANCE (%)	CRONBACH's ALPHA
1 CLOSE FAMILY RELATIONSHIPS	13.151	0.869
2 FAMILY RESPECT & HONOUR	10.935	0.861
3 DAILY LIVING CONDITIONS	10.565	0.862
4 WEALTH	9.195	0.824
5 COMMUNITY PARTICIPATION & CONNECTIONS	8.866	0.790
TOTAL	52.712	

NOTES:
Principal axis factor extraction. Forced 5 factor solution with varimax rotation.
n= 394
Loadings <.40 suppressed

I was able to assign four of the subscales the same labels as BUGS scales, as they represented the same dimensions of QoL. The only difference was in the content of the daily living conditions subscale, the DUGS scale consisted of only 6 items which can be regarded as basic needs. In addition the structure did not include a *local services* subscale, which is surprising considering the poor service provision in the urban site. However, the emergence

of a subscale which included the items family respect, family reputation, character and personal respect is particularly interesting:

DUGS 2 Family Respect & Honour

> The majority of women in the urban site were involved in paid work outside of the home, due to the high living costs and insecure livelihoods. However, for poorer women, such work is still regarded as contrary to socio-cultural norms which dictate male and female interactions and respectability, and is regarded as a threat to women's honour, and the reputation and status of a family (Banks, 2013; Salway et al., 2005). In general women in the urban site, and their daughters, regardless of whether they are working or not, will be more likely to be interacting with people outside of the family, and to be susceptible to harassment from men (Pryer, 2017). Any loss of honour may not only provoke retaliation from male members of the household (Kabeer, 1997; Naved and Persson, 2005), but may also impact on the households position within its social networks, which are a source of information and mutual support (Banks, 2013).
>
> Within the context of the slum, other threats to the family's and the individual's honour arise as a result of drug and alcohol abuse, gambling (Mines and Lamb, 2010, p. 183; Rashid, 2006) and extra-marital relationships (Jesmin and Salway, 2000).

The internal reliability statistics of all the subscales was very good (all exceeding.4) Cronbach's alpha of all five subscales was very good (all >.7). Removal of the items character and assisting others did result in a small increase in Cronbach's alpha for the *family respect and honor* scale, but these increases were negligible, and so the items were retained at this point.

Table 51 shows descriptive statistics for subscales of the Dhaka Unweighted Goal Satisfaction (DUGS) and Mean DUGS. The distribution of scores are shown in the histograms in Figure 11.

Table 51 Descriptive statistics DUGS

DUGS	1. CLOSE FAMILY RELATIONSHIPS	2. FAMILY RESPECT & HONOUR	3. LIVING CONDITIONS	4. WEALTH	5. COMMUNITY PARTICIPATION & CONNECTIONS	MEAN-DUGS
Count	394	394	394	394	394	394
Mean	1.94	1.71	1.64	0.84	0.43	1.31
Std. dev.	0.80	0.86	0.78	0.69	0.46	0.49
Range	4.00	4.00	4.00	3.50	3.00	2.49
Min.	0.00	0.00	0.00	0.00	0.00	0.26
10th percentile	0.88	0.40	0.33	0.17	0.17	0.70
Median	2.00	1.80	1.83	0.67	0.17	1.32
90th percentile	3.00	2.80	2.50	1.75	1.17	1.99
Maximum	4.00	4.00	4.00	3.50	3.00	2.75
Skewness	-0.035	0.145	-0.164	1.204	2.260	0.308
Std. Error of Skewness	0.123	0.123	0.123	0.123	0.123	0.123
Kurtosis	-0.306	-0.404	0.108	1.481	6.509	-0.257
Std. Error of Kurtosis	0.245	0.245	0.245	0.245	0.245	0.245
Correlation with SWLS	0.551	0.403	0.271	0.384	0.273	0.563
All correlations p<.001						

In this case the mean score for all five of the subscales was below the midpoint of the scale (=2). The highest mean scores were for close *family relationships* and *family respect and honour*. The lowest mean score was *for community participation and connections* (Table 51).

Table 51 also shows the correlation of Mean DUGS and DUGS subscales with SWLS scores. The Mean DUGS score has a correlation of.563 with SWLS indicating good convergence validity. The highest correlations are with the *close family relationships* and *family respect and honour* scores, suggesting that these are the two dimensions of QoL which contribute most to women' s QoL in the urban site.

At the very least the DUGS model provides a theoretical model for understanding the construction of QoL for women in the urban site.

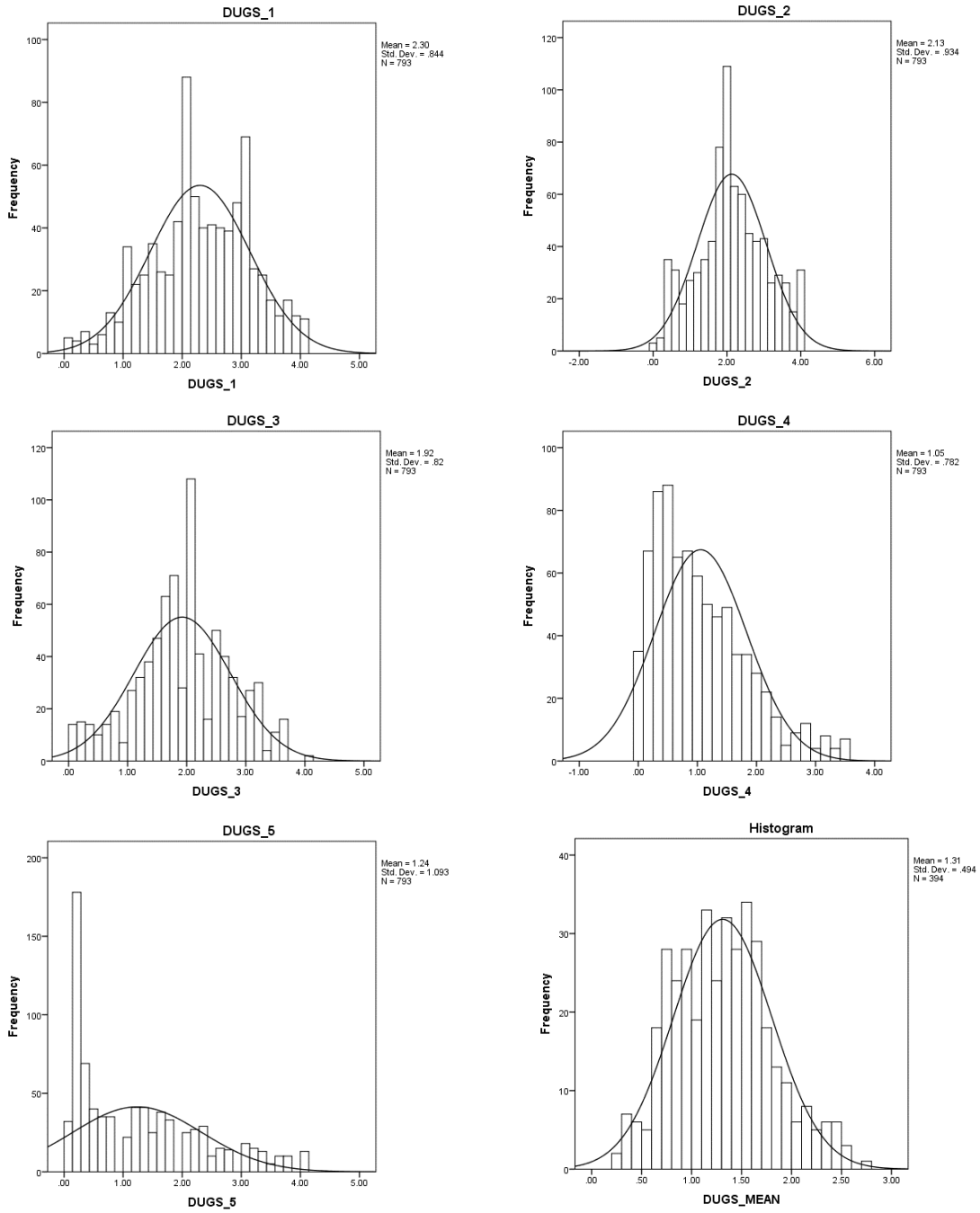

Figure 11 Histograms of DUGS scores

7.3.3 DISCRIMINANT VALIDITY OF THE DUGS SCALES

As two of the five subscales (*living conditions* and *wealth*) had non normal distributions, I used the Mann-Whitney and Kruskall-Wallis tests for all subscales for consistency. In each case post hoc comparisons were only made where the initial Kruskall-Wallis test survived the Bonferroni correction of $p<.01$. Table 52 shows comparisons between sub-groups defined by the respondent's age group, schooling and employment for DUGS subscales.

Table 52 DUGS scores: respondent age, school attainment and paid employment comparisons

Age of respondent		N	Mean	Std. devn.	p. value of Mann Whitney U for post hoc comparisons	
					25 to 39 years	*>=40 years*
DUGS-1. CLOSE FAMILY RELATIONSHIPS						
H= 15.183 d.f.=2	<25 years	126	2.106	0.792	p. <.01	p. <.01
p<.001	25 to 39 years	188	1.955	0.767	-	n.s.
	>=40 years	79	1.622	0.799	-	-
DUGS-2 FAMILY RESPECT & HONOUR						
H= 1.228 d.f.=2	<25 years	126	1.784	0.866		
p=.541	25 to 39 years	188	1.678	0.819		
	>=40 years	79	1.641	0.921		
DUGS-3 LIVING CONDITIONS						
H=2.448, d.f.=2	<25 years	126	1.650	0.746		
p=.294	25 to 39 years	188	1.682	0.763		
	>=40 years	79	1.523	0.854		
DUGS-4 WEALTH						
H=4.474, d.f.=2	<25 years	126	0.918	0.667		
p=.107	25 to 39 years	188	0.793	0.698		
	>=40 years	79	0.808	0.711		
DUGS-5 COMMUNITY PARTICIPATION AND CONNECTIONS						
H=0.196, d.f.=2	<25 years	126	0.427	0.452		
p=.907	25 to 39 years	188	0.445	0.503		
	>=40 years	79	0.378	0.337		
MEAN DUGS						
H=7.384 d.f.=2	<25 years	126	1.377	0.472		
p<.05	25 to 39 years	188	1.311	0.494		
	>=40 years	79	1.194	0.510		

Educational attainment of respondent		N	Mean	Std. devn.	p. value of Mann Whitney U for post-hoc comparisons	
					Primary or less	*Above primary*
DUGS-1. CLOSE FAMILY RELATIONSHIPS						
H=7.353, d.f.=2	None	251	1.861	0.806		
p<.05	Primary or less	84	2.134	0.837		
	Above primary	58	1.976	0.652		
DUGS-2 FAMILY RESPECT & HONOUR						
H=4.772, d.f.=2	None	251	1.648	0.863		
p=.092	Primary or less	84	1.881	0.868		
	Above primary	58	1.693	0.780		
DUGS-3 LIVING CONDITIONS						
H=7.175, d.f.=2	None	251	1.572	0.795		
p<.05	Primary or less	84	1.742	0.756		
	Above primary	58	1.785	0.701		
DUGS-4 WEALTH						
H=5.584, d.f.=2	None	251	0.774	0.662		
p=.061	Primary or less	84	0.964	0.765		
	Above primary	58	0.922	0.681		
DUGS-5 COMMUNITY PARTICIPATION AND CONNECTIONS						
H=5.440, d.f.=2	None	251	0.382	0.405		
p=.066	Primary or less	84	0.536	0.542		
	Above primary	58	0.457	0.515		
MEAN DUGS						
H=11.564 d.f.=2	None	251	1.247	0.489	p. <.01	p. <.01
p<.01	Primary or less	84	1.451	0.519	-	n.s.
	Above primary	58	1.308	0.427		

Respondent employed or involved in income generating activities		N	Mean	Std. devn.
DUGS-1. CLOSE FAMILY RELATIONSHIPS				
U= 7633.00	Yes	349	1.933	0.808
p=.949	No	44	1.963	0.727
DUGS-2 FAMILY RESPECT & HONOUR				
U=7112.00	Yes	349	1.719	0.865
p=.423	No	44	1.586	0.770
DUGS-3 LIVING CONDITIONS				
U=7276.00	Yes	349	1.642	0.776
p=.569	No	44	1.617	0.797
DUGS-4 WEALTH				
U=6780.50	Yes	349	0.853	0.701
p=.204	No	44	0.701	0.598
DUGS-5 COMMUNITY PARTICIPATION AND CONNECTIONS				
U=7274.5	Yes	349	0.433	0.467
p=.551	No	44	0.367	0.376
MEAN DUGS				
U=7097.50	Yes	349	1.316	0.723
p=.414	No	44	1.247	0.653

The only subscale that differed by the age group of the respondent was *close family relationships*. The youngest women (those aged less than 25 years) scored significantly higher on this subscale. This may be a reflection of the fact that younger women, will be in the early stage of marriage and be forming a relationship with their husband. As they are urban respondents they may also be less likely to be living in a joint or extended household.

Respondents who had not received any schooling reported lower scores for *close family relationships* and *living conditions.* As previously discussed, this group will represent the poorer women. There were no differences in scale scores by the employment status of the woman. The vast majority of women are working and there was relatively little variation in the economic situtation of hosueholds in which women work compared to households in which women do not work.

Respondents from better off households defined in terms of wealth category (richer than average and average/ poorer than average) scored higher on all DUGS subscales (Table 53). Respondents form households in which some household members could read and write had higher scoress for all subscales, except *family honour and respect*

Mean DUGS only differed by schooling level of the respondent, respondents who had not received any education scored lower than respondents who had received some education (primary or less and above primary) ($p<.001$). Respondents from richer than average and average households had similar scores.

Table 53 DUGS scores: household wealth category and family members literacy level comparisons

Self-rated wealth category		N	Mean	Std. devn.	p. value of Mann Whitney U for sub-scales	
					About average	*Poorer than average*
DUGS-1. CLOSE FAMILY RELATIONSHIPS						
H=28.721, d.f.=2	Richer than average	57	2.173	0.663	n.s.	p. <.01
p. <.001	About average	146	2.135	0.764		p. <.01
	Poorer than average	191	1.715	0.802		
DUGS-2 FAMILY RESPECT & HONOUR						
H=56.836, d.f.=2	Richer than average	57	2.326	0.724	n.s.	p. <.01
p. <.001	About average	146	1.859	0.785		p. <.01
	Poorer than average	191	1.411	0.826		
DUGS-3 LIVING CONDITIONS						
H=36.053, d.f.=2	Richer than average	57	2.018	0.702	n.s.	p. <.01
p. <.001	About average	146	1.781	0.594		p. <.01
	Poorer than average	191	1.421	0.852		
DUGS-4 WEALTH						
H=89.664, d.f.=2	Richer than average	57	1.465	0.780	n.s.	p. <.01
p. <.001	About average	146	0.962	0.623		p. <.01
	Poorer than average	191	0.552	0.547		
DUGS-5 COMMUNITY PARTICIPATION AND CONNECTIONS						
H=14.318, d.f.=2	Richer than average	57	0.708	0.668	n.s.	p. <.01
p. <.001	About average	146	0.414	0.421		p. <.01
	Poorer than average	191	0.355	0.375		
DUGS-TOTAL						
H=90.366, d.f.=2	Richer than average	57	8.689	2.148	n.s.	p. <.01
p. <.001	About average	146	7.152	2.107		p. <.01
	Poorer than average	191	5.454	2.238		

Literacy levels of household members. How many household members can read and write?		N	Mean	Std. devn.	p. value of Mann Whitney U for sub-scales	
					Less than half	*None*
DUGS-1. CLOSE FAMILY RELATIONSHIPS						
H=16.918, d.f.=2	Half or more	94	2.207	0.722	n.s.	p. <.01
p<.001	Less than half	91	1.990	0.845		p. <.01
	None	209	1.793	0.777		
DUGS-2 FAMILY RESPECT & HONOUR						
H=6.714, d.f.=2	Half or more	94	1.860	0.891		
p.<.05	Less than half	91	1.815	0.731		
	None	209	1.595	0.884		
DUGS-3 LIVING CONDITIONS						
H= 9.419, d.f.=2	Half or more	94	1.752	0.722	n.s.	p. <.01
p.<.01	Less than half	91	1.771	0.800		p. <.01
	None	209	1.534	0.777		
DUGS-4 WEALTH						
H=24.620, d.f.=2	Half or more	94	1.096	0.742	n.s.	p. <.01
p.<.01	Less than half	91	0.888	0.710		p. <.01
	None	209	0.697	0.621		
DUGS-5 COMMUNITY PARTICIPATION AND CONNECTIONS						
H=11.642, d.f.=2	Half or more	94	0.546	0.608	n.s.	p. <.01
p.<.01	Less than half	91	0.522	0.527		p. <.01
	None	209	0.334	0.307		
MEAN DUGS						
H=26.797, d.f.=2	Half or more	94	1.492	0.737	n.s.	p. <.01
p.<.01	Less than half	91	1.397	0.722		p. <.01
	None	209	1.190	0.673		

Multiple linear regression was conducted with the DUGS-MEAN score as the dependent variable.

The characteristics that had been found to be significantly related to scale scores in the univariate analyses above (Table 52 and Table 53) were entered as a block. The independent predictors were respondent schooling (dichotomized as some/none), household wealth category (dichotomized as richer than average and average/poorer than average), and household members literacy level (dichotomized as some can read and write/ none can read or write).

Table 47 shows the unstandardized regression coefficients (B) and their standard error (SE B), as well as standardized (Beta) regression coefficients and collinearity statistics. The correlations between the predictor variables were all below.7. Collinearity tolerance values were all >.01 and VIF values were <10, indicating that there was no collinearity between the predictor variables and so all could be included in the subsequent analyses (Field, 2009).

MODEL			Unstandardised		Standardised			Collinearity statistics	
			Beta	Std. error	coefficients	t	Sig.	Tolerance	VIF
MEAN DUGS		(Constant)	1.017	0.037		27.525	0.000		
Adjusted R^2	0.211	REG_RESP_EDUC	0.074	0.048	0.072	1.548	0.122	0.934	1.071
F (3,390)=	36.137, p<.000	**REG_WEALTH_CATEG**	0.380	0.046	0.385	8.300	**0.000**	0.934	1.07
		REG_ED_HHMEM	0.151	0.046	0.153	3.248	**0.001**	0.908	1.101

Table 54 Summary of regression analysis for variables predicting Mean DUGS

The total variance explained by the model as a whole was R^2=.211, F(3,390)=36.137, p<.001 (Table 54). The Mean DUGS model had greater predictive value, with the same statistically significant predictor variables (*category* and *household members literacy*), than that of the model predicting Mean BUGS in the urban site (Table 48) which had explained total variance 16.5%, F(5,388)=15.318, p<.001.

As both Mean DUGS and Mean BUGS are measures of overall QoL, this suggests that the Mean DUGS scores are a more valid measure of QoL for the urban respondents. In other word the DUGS model is better at representing what matters to urban women's quality of life than the BUGS model. This means that the construct validity of the DUGS model is greater than that of the BUGS model for the measurement of QoL of women in the urban site.

7.3.4 SYLHET (RURAL) UNWEIGHTED GOAL SATISFACTION (RUGS)- STRUCTURE AND INTERNAL CONSISTENCY RELIABILITY ASSESSMENT

Finally, I ran PAF using the correlation matrix of the rural unweighted goal satisfaction scores, with varimax rotation. After examining the scree plot (Appendix N) I ran PAF seeking forced four, five and six factor solutions and examined each one. In this case the

four factor solution was selected and purified. The final solution retained 46 items and explained 44.05% of variance.

The structure of the model was very different to the DUGS subscales. The four factors were as follows:

RUGS 1 Wealth and Day-to-day Life

This factor, consisting of 18 items had a broad focus, as indicated by the label. The aspects of life which relate to daily living conditions is much broader than that of the DUGS model, including items which are relevant in the rural site (e,g, food production and livestock). It also included items, which I have termed wealth, which reflect the overall economic condition of the household, such as landholdings, income of household and personal income.

RUGS 2: The Community and the Family.

This factor had a broader focus than the BUGS and DUGS *Community participation and Connections.* It included items that concern the household's involvement in the community, as well as the standing of the household within the community. The emergence of this dimension in the rural data reflects how households in the site are firmly entrenched in the local *samaj* (society).

RUGS 3: Close Family Relationships. The striking difference about this scale, from the BUGS and DUGS scales, was the inclusion of items concerning children (children behavior and children achievements[131]).

RUGS 4: Local Services An equivalent factor had not emerged in the DUGS model. There were differences in the quality of internal roads and services such as electricity connections depending on which part of the site the respondent lived in. Whether these differences arose from underlying socioeconomic differences is not clear e.g. poorer households residing in more remote parts of the site.

The internal reliability statistics of all the subscales was very good (all exceeding.4) Cronbach's alpha of all five subscales was very good (all >.8). There were several items which when removed resulted in a very small increase in Cronbach's alpha of the *wealth and*

[131] The proportion of missing values for the item children's upbringing was lower for the rural sample compared to the urban sample (7.2% vs 28.9%) , which may have meant that the variation in satisfaction ratings for the items related to children was adequate for factor analysis.

day-today life subscale (e.g. personal wealth, recreation, livestock). As the increase in Cronbach's alpha is extremely small I did not think that their inclusion damaged the subscale markedly.

Table 55 Rural unweighted goal satisfaction (RUGS). Principal axis factor, forced four factor solution and internal consistency reliability alpha statistics (46 items) n= 399

RURAL UNWEIGHTED GOAL SATISFACTION (RUGS) PAF 4 FACTOR VARIMAX. 46 ITEMS	FACTOR LOADINGS	CORRECTED ITEM TOTAL CORRELATION	CRONBACH'S ALPHA IF DELETED	COMMUNALITIES
RUGS-1: WEALTH & DAY-TO-DAY LIFE				
1 SMEAN(LandHoldings)	0.696	0.682	0.908	0.516
2 SMEAN(ConvenienceGoods)	0.690	0.681	0.908	0.510
3 SMEAN(HouseholdGoods)	0.683	0.696	0.908	0.534
4 SMEAN(Clothing)	0.680	0.713	0.908	0.596
5 SMEAN(Housing)	0.677	0.679	0.908	0.530
6 SMEAN(IncomeHousehold)	0.649	0.648	0.909	0.469
7 SMEAN(Food)	0.646	0.666	0.909	0.510
8 SMEAN(Toilet)	0.630	0.627	0.909	0.424
9 SMEAN(HouseOwnership)	0.585	0.658	0.908	0.515
10 SMEAN(Phone)	0.581	0.591	0.911	0.388
11 SMEAN(FoodProduction)	0.572	0.559	0.911	0.356
12 SMEAN(SafeWater)	0.542	0.472	0.914	0.298
13 SMEAN(SavingsHousehold)	0.542	0.507	0.912	0.320
14 SMEAN(Electricity)	0.471	0.456	0.914	0.256
15 SMEAN(Livestock)	0.463	0.492	0.913	0.290
16 SMEAN(BeingAtPeace)	0.460	0.501	0.913	0.394
17 SMEAN(Recreation)	0.444	0.52	0.912	0.346
18 SMEAN(PersonalWealth)	0.425	0.468	0.913	0.260
RUGS-2: THE COMMUNITY AND THE FAMILY				
1 SMEAN(CommunityDecisions)	0.695	0.725	0.916	0.571
2 SMEAN(CommunityOrganisations)	0.690	0.719	0.916	0.578
3 SMEAN(FamilyRespect)	0.680	0.731	0.917	0.599
4 SMEAN(CommunityDevelopment)	0.680	0.697	0.917	0.595
5 SMEAN(CommunityFestivals)	0.676	0.698	0.917	0.549
6 SMEAN(FamilyReputation)	0.667	0.711	0.918	0.578
7 SMEAN(CommunityAssistance)	0.632	0.63	0.919	0.460
8 SMEAN(AccessToInfluentials)	0.631	0.618	0.920	0.481
9 SMEAN(PersonalRespect)	0.631	0.727	0.917	0.586
10 SMEAN(NeighbourhoodRelations)	0.551	0.644	0.919	0.476
11 SMEAN(AssistingOthers)	0.523	0.634	0.919	0.448
12 SMEAN(Friendships)	0.489	0.595	0.921	0.422
13 SMEAN(Leaders)	0.449	0.541	0.922	0.335
14 SMEAN(AccessInformation)	0.431	0.578	0.921	0.427
15 SMEAN(TrustworthyFriend)	0.421	0.513	0.924	0.315
RUGS-3: CLOSE FAMILY RELATIONSHIPS				
1 SMEAN(FamilyRelations)	0.598	0.589	0.793	0.434
2 SMEAN(RelationsHusband)	0.579	0.569	0.793	0.397
3 *SMEAN(ChildrenBehaviour)*	0.561	0.517	0.801	0.342
4 SMEAN(Character)	0.527	0.529	0.798	0.380
5 SMEAN(Religion)	0.503	0.521	0.799	0.332
6 SMEAN(InLawsDecisions)	0.497	0.547	0.797	0.396
7 *SMEAN(ChildrenAchievements)*	0.488	0.46	0.806	0.283
8 SMEAN(InLawsSupportHelp)	0.465	0.521	0.800	0.327
9 SMEAN(RelationsNatal)	0.417	0.436	0.809	0.286
RUGS-4: LOCAL SERVICES				
1 SMEAN(ServicesHealth)	0.671	0.652	0.738	0.604
2 SMEAN(ServicesGovt)	0.664	0.592	0.768	0.531
3 SMEAN(Markets)	0.544	0.607	0.760	0.534
4 SMEAN(EducationalInstitutes)	0.521	0.624	0.751	0.487

	VARIANCE (%)	CRONBACH's ALPHA
1 WEALTH & DAY-TO-DAY LIFE	15.368	0.911
2 THE COMMUNITY AND THE FAMILY	14.376	0.924
3 CLOSE FAMILY RELATIONSHIPS	8.869	0.818
4 LOCAL SERVICES	5.441	0.805
TOTAL	**44.054**	

NOTES:

Principal axis factor extraction. Forced 4 factor solution with varimax rotation.

n= 399

Loadings <.40 suppressed

The RUGS subscale scores were computed and the descriptive statistics and histograms of the subscale scores are shown in Table 56 and Figure 12

Table 56 RUGS descriptive statistics and correlation with SWLS

RUGS	1. WEALTH AND DAY-TO-DAY LIFE	2. THE COMMUNITY & THE FAMILY	3. CLOSE FAMILY RELATIONSHIPS	4. LOCAL SERVICES	MEAN-RUGS
Count	399	399	399	399	399
Mean	1.88	2.13	2.86	1.92	2.19
Std. dev.	0.79	0.83	0.64	0.98	0.64
Range	3.88	3.53	2.78	4.00	3.02
Min.	0.06	0.47	1.22	0.00	0.83
10th percentile	0.88	1.13	1.92	0.75	1.43
Median	1.82	2.00	2.89	2.00	2.18
90th percentile	3.12	3.40	3.78	3.25	3.17
Maximum	3.94	4.00	4.00	4.00	3.85
Skewness	0.228	0.320	-0.210	0.274	0.329
Std. Error of Skewness	0.122	0.122	0.122	0.122	0.122
Kurtosis	-0.691	-0.545	-0.604	-0.613	-0.336
Std. Error of Kurtosis	0.244	0.244	0.244	0.244	0.244
Correlation with SWLS	0.577	0.351	0.421	0.267	0.493
All correlations p<.001					

Similar to the DUGS scores, *Close family relationships* had the highest mean scores (2.86, s.d..64) and *wealth and day-to-day life* the lowest (1.88, s.d..79). the distribution of scores for each subscale (Figure 12), indicate that each subscale could discriminate between respondents with high and low levels of QoL.

I also examined the relationship between the four subscale scores and SWLS scores to determine convergent validity. The Spearman's rho was positive and significant <.001, for all the RUGS subscales. As in the case of the Bangladesh scales (BUGS and BIGS), scales with the themes relating to daily living conditions and close relationships had the strongest relationship with SWLS scores. The correlation between SWLS and the Mean RUGS score was.493 (p<.001), which is approaching.50, and is as expected considering the underlying constructs that these two measures represent.

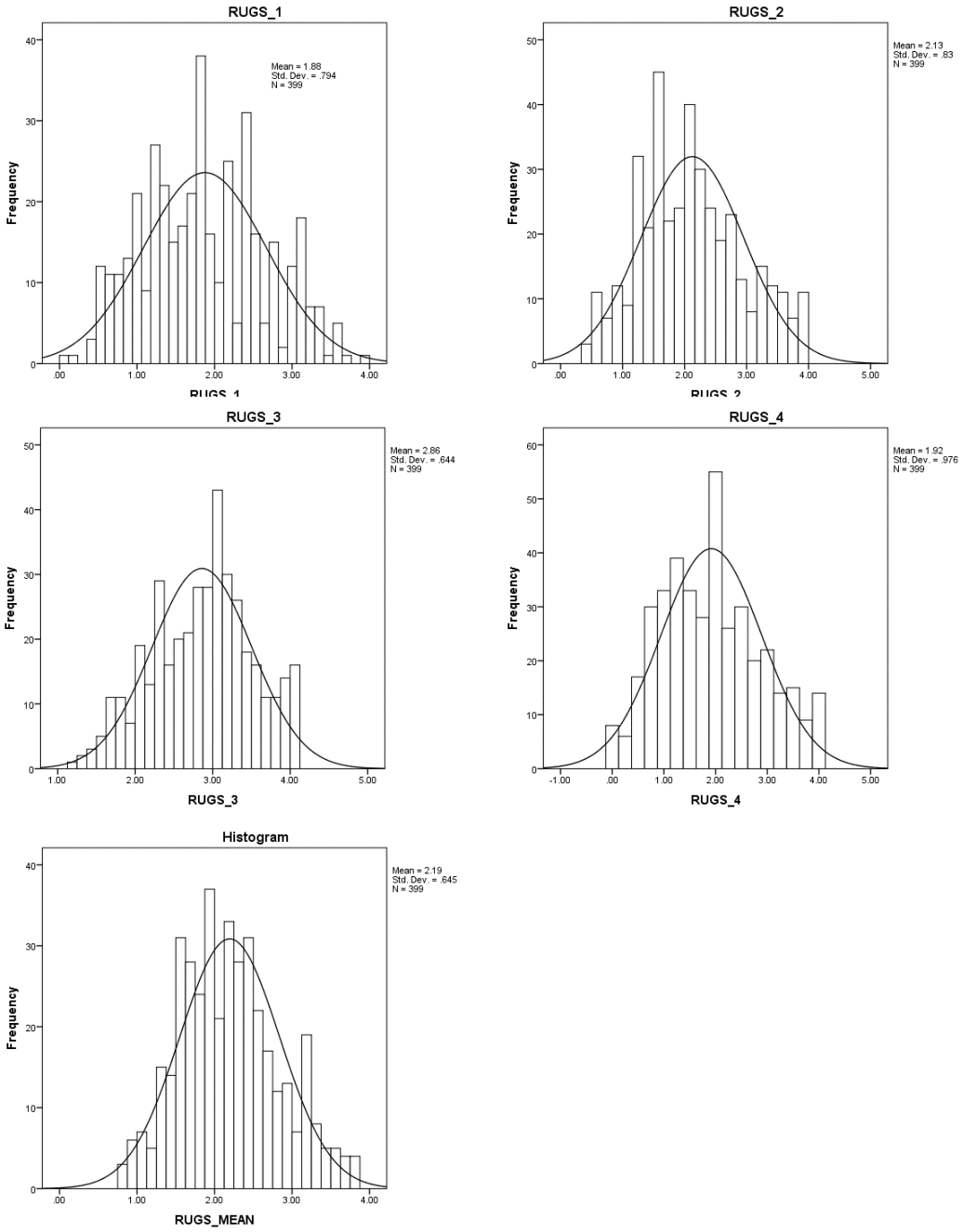

Figure 12 Histograms of RUGS scores

7.3.5 CONVERGENT AND DISCRIMINANT VALIDITY OF THE RUGS SCALES

The skewness statistics for three of the RUGS subscales was greater than twice the standard error indicating that the distribution is not normal. The non-parametric tests Mann-Whitney and Kruskall-Wallis tests were used all the subscales for consistency. As before post hoc comparisons were only made where the initial Kruskall-Wallis test survived the Bonferroni correction of $p<.01$. Table 57 shows comparisons between sub-groups defined by the respondent's age group, schooling and employment for RUGS subscales.

Table 57 RUGS scores: respondent age, schooling and employment subgroup comparisons

Age of respondent		N	Mean	Std. devn.	p. value of Mann Whitney U for post hoc comparisons	
					25 to 39 years	*>=40 years*
RUGS-1 WEALTH & DAY-TO-DAY LIFE						
H= 8.109, df=2	<25 years	83	1.959	0.792		
p.<.05	25 to 39 years	219	1.894	0.811		
	>=40 years	97	1.761	0.749		
RUGS-2 COMMUNITY AND FAMILY						
H= 5.119 df=2	<25 years	83	1.983	0.797		
p. <.05	25 to 39 years	219	2.148	0.834		
	>=40 years	97	2.194	0.844		
RUGS-3 CLOSE FAMILY RELATIONSHIPS						
H=13.801.151, df=2	<25 years	83	2.820	0.578	p. <.01	p. <.01
p.<.001	25 to 39 years	219	2.859	0.630	-	n.s.
	>=40 years	97	2.900	0.728	-	-
RUGS-4 LOCAL SERVICES						
H= 5.373, df=2	<25 years	83	1.895	0.910		
p.=.068	25 to 39 years	219	1.895	0.910		
	>=40 years	97	1.887	0.947		
MEAN RUGS						
H=.296, df=2	<25 years	83	2.164	0.591		
p= 0.862	25 to 39 years	219	2.210	0.655		
	>=40 years	97	2.185	0.671		

Educational attainment of respondent		N	Mean	Std. devn.	p. value of Mann Whitney U for post-hoc comparisons	
					Primary or less	*Above primary*
RUGS-1 WEALTH & DAY-TO-DAY LIFE						
H=13.832, d.f.=2	None	175	1.832	0.785	p. <.01	p. <.01
p<.001	Primary or less	121	1.893	0.796	-	n.s.
	Above primary	103	1.928	0.808		
RUGS-2 COMMUNITY AND FAMILY						
H=12.428, d.f.=2	None	175	2.097	0.854		
p<.05	Primary or less	121	2.142	0.810		
	Above primary	103	2.154	0.819		
RUGS-3 CLOSE FAMILY RELATIONSHIPS						
H=7.54, d.f.=2	None	175	2.826	0.635		
p<.05	Primary or less	121	2.938	0.686		
	Above primary	103	2.830	0.605		
RUGS-4 LOCAL SERVICES						
H=3.953, d.f.=2	None	175	1.933	0.994		
p=.139	Primary or less	121	1.901	0.973		
	Above primary	103	1.910	0.958		
MEAN RUGS	None	175	8.687	2.595		
H=.738, df=2	Primary or less	121	8.873	2.713		
p=.691	Above primary	103	8.822	2.405		

Respondent employed or involved in income generating activities		N	Mean	Std. devn.
RUGS-1 WEALTH & DAY-TO-DAY LIFE				
U=2335.00	Yes	16	1.563	0.670
p=.107	No	383	1.888	0.797
RUGS-2 COMMUNITY AND FAMILY				
U=2760.00	Yes	16	2.242	0.709
p=.501	No	383	2.120	0.835
RUGS-3 CLOSE FAMILY RELATIONSHIPS				
U=2986.00	Yes	16	2.853	0.632
p=.864	No	383	2.861	0.645
RUGS-4 LOCAL SERVICES				
U=2415.00	Yes	16	1.547	0.802
p=.150	No	383	1.933	0.981
MEAN RUGS		16	2.051	0.441
U=2677.00	Yes	383	2.201	0.652
p=.392	No			

The youngest respondents (less than 25 years) had significantly ($p<.001$) lower scores for *close family relationships.* This entire group will in all likelihood be recently married and will still be adjusting to their marital families and married life. This is very different to the urban site where the youngest respondents had the *highest* scores for close family relationships. None of the other scales differed by the age group of the respondent. Respondents who had not received any schooling, who will tend to be married into poorer and less educated households, had significantly lower scores ($p<.001$) than respondents who had received at least some schooling (less than primary and above primary) for *wealth and day-to-day life*. Scores on the RUGS scales did not vary with the employment status of the respondent, of which there were only 16 respondents. Mean RUGS scores did not vary between groups based on the respondent characteristics.

Table 58 shows comparisons between sub-groups defined by characteristics of the respondent's household: wealth category and literacy levels of household members.

Table 58 RUGS scores: respondent age, schooling and employment subgroup comparisons

Self-rated wealth category		N	Mean	Std. devn.	p. value of Mann Whitney U for sub-scales	
					About average	*Poorer than average*
RUGS-1 WEALTH & DAY-TO-DAY LIFE						
H= 136.141, df=2	Richer than average	97	2.590	0.684	p<001	p<.001
p<.001	About average	131	1.973	0.650		p<.001
	Poorer than average	164	1.392	0.598		
RUGS-2 COMMUNITY AND FAMILY						
H= 25.411, df=2	Richer than average	97	2.458	0.807	p<001	p<.001
p<.001	About average	131	2.165	0.765		p<.001
	Poorer than average	164	1.923	0.828		
RUGS-3 CLOSE FAMILY RELATIONSHIPS						
H=10.803, df=2	Richer than average	97	3.001	0.591	n.s.	p<.001
p<.001	About average	131	2.930	0.666		p<.001
	Poorer than average	164	2.746	0.634		
RUGS-4 LOCAL SERVICES						
H=6.684, d.f.=2	Richer than average	97	2.173	1.105		
p =.035	About average	131	1.878	0.927		
	Poorer than average	164	1.843	0.889		
RUGS-MEAN						
H= 43.655, df=2	Richer than average	97	2.555	0.655	p<001	p<.001
p<.001	About average	131	2.236	0.586		p<.001
	Poorer than average	164	1.976	0.575		
Literacy levels of household members. How many household members can read and write?		**N**	**Mean**	**Std. devn.**	**p. value of Mann Whitney U for sub-scales**	
					Less than half	*None*
RUGS-1 WEALTH & DAY-TO-DAY LIFE						
H= 44.406, df=2	p<.001	114	2.220	0.795	p<.01	p<.001
p<.001	p<.001	131	1.933	0.783		p<.001
	None	154	1.571	0.683		
RUGS-2 COMMUNITY AND FAMILY						
H= 20.710, df=2	Half or more	114	2.314	0.840	n.s	p<.001
p<.001	Less than half	131	2.220	0.812		p=.001
	None	154	1.904	0.792		
RUGS-3 CLOSE FAMILY RELATIONSHIPS						
H= 6.503, df=2	Half or more	114	2.950	0.710	n.s	n.s.
p<.001	Less than half	131	2.896	0.569		n.s.
	None	154	2.765	0.643		
RUGS-4 LOCAL SERVICES						
H= 8.698, df=2	Half or more	114	2.090	1.008		
p<.013	Less than half	131	1.971	0.944		
	None	154	1.744	0.957		
RUGS-MEAN						
H= 27.219, df=2	Half or more	114	2.393	0.664	n.s.	p<.001
p<.001	Less than half	131	2.255	0.620		p<.001
	None	154	1.996	0.597		

Respondents from wealthier households (as defined by the wealth category) had higher scores for the subscales *wealth and day-today life* and *community and family*, with significant differences between richer than average and average households (p<.001), and average households and poorer than average households (p<.001). Mean RUGS scores differed in the same way. Richer than average and average households had significantly higher scores than poorer than average households for *close family relationships*, the poorest group in rural settings will be less likely to be able to maintain extended and joint household structures and to offer one another material support.

Respondents from households in which more of the households members were able to read and write had higher scores for wealth and day-to-day life. The most educated households, those in which more than half of the members could read and write had significantly higher scores for the *community and family subscale, than less educated* households. The more educated households are the more influence they will have in community matters and their greater their status within the community. Mean RUGS was also greater for households in which more than half of the members could read and write.

I conducted a multiple linear regression with the Mean RUGS score as the dependent variable. The characteristics that had been found to be significantly related to scale scores in the univariate analyses above (Table 58) were entered as a block, no respondent level characteristics were included as these were not significantly related to Mean RUGS. As there were significant differences between each level of the household level predictors, these variables were entered into the model after creating dummy variables in two steps. The independent predictor household wealth category was entered after creating dummy variables: richer than average (yes/ no) and poorer than average (yes /no), and household members literacy level was entered after creating dummy variables: more than half can read and write (yes/no) and less than half can read and write (yes/no).

Table 59 Summary of regression analysis for variables predicting Mean RUGS.

MODEL		Unstandardised coefficients		Standardised coefficients			Collinearity statistics	
		Beta	Std. error	beta	t	Sig.	Tolerance	VIF
MEAN RUGS								
Model 1	(Constant)	1.963	0.047		41.649	0.000		
Adjusted R^2 0.124	**relvwealth2$=Richer**	0.583	0.077	0.391	7.544	**0.000**	0.835	1.198
F (2,389)= 28.701, p<.000	**relvwealth2$=Average**	0.262	0.071	0.192	3.706	**0.000**	0.835	1.198
Model 2	**(Constant)**	1.871	0.055		34.070	**0.000**		
Adjusted R^2 0.146	**relvwealth2$=Richer**	0.505	0.080	0.338	6.349	**0.000**	0.768	1.301
F (4,387)= 17.732, p<.000	**relvwealth2$=Average**	0.204	0.072	0.149	2.837	**0.005**	0.789	1.267
	edhhmem$=Half or more can write	0.262	0.078	0.184	3.373	**0.001**	0.734	1.363
	edhhmem$=Less than half can write	0.170	0.073	0.124	2.323	**0.021**	0.768	1.302

Wealth category of the household accounted for 12.4% variance, and household literacy level only accounted for an additional 2.2% of total variance (the two indicators will be highly correlated). The results indicate that the wealthier the household and the higher the literacy level the greater the respondents Mean RUGS score. Compared to the BUGS model (Table 48) the RUGS model has less predictive value, however it does provide more information concerning satisfaction in relation to dimensions of QoL which are specific to the site.

7.3.6 DISCUSSION

In this section I presented the findings from the exploration of the underlying theoretical structure of the satisfaction data for the rural and the urban data.

PAF of the unweighted goal satisfaction scores for each site revealed dimensions of QoL which are pertinent to each site. While the use of the BUGS scales allows comparisons to be made between sites, development of site specific scales has the potential to improve the measurement of QoL

8 DRIVERS OF WELLBEING

8.1 AIMS AND SCOPE

In the previous chapters I presented the findings from the frequency analysis of the goal satisfaction and goal necessity data (Chapter 6), and factor analysis of the satisfaction data to derive dimensions of QoL which are important to women of child-bearing age in Bangladesh in different settings (Chapter 7). I discussed the findings drawing on my knowledge of the two sites and the respondents, and the literature to explain how the meaning or significance of certain goal items and of QoL dimensions differ by the context and the characteristics of the respondents such as age and socio-economic characteristics.

In this chapter I again draw on the existing literature, augmented with relevant qualitative findings from the interviews and pre-testing exercises, to gain a more nuanced of understanding of the relevance of education and its relationship with wellbeing. Differencs between different groups of women will be explored (i.e. rural/urban, better off/poorer, and younger/older).

8.2 EDUCATION AND WELLBEING: MATERIAL GAINS, SYMBOLIC CAPITAL, AND 'MAKING A HUMAN'

Referring to the goal necessity ratings, very high proportions of the respondents in both sites had rated the education of family members as 'necessary or 'very necessary' for their wellbeing (91.4% and 97.3%, in urban and rural site respectively). In contrast only 13.5% of urban respondents and 19% of respondents in the rural site were 'completely' or 'mostly satisfied' with the education of family members. Education of self was also highly prioritised and lowly satisfied in the two sites[132]. Bearing in mind the differences in socio-economic status of respondents, and in social organisation and livelihood activities the similarity in these figures is striking.

8.2.1 MATERIAL BENEFIT

In the urban site respondents referenced lack of education as an obstacle to them improving their lives.

[132] Regarding their own education 80% and 93% rated this as either 'very necessary' or necessary in the urban and rural sites respectively. While 16.3% of the rural respondents compared to 6.3% of the urban respondents were satisfied ('completely' or 'mostly satisfied') with their own education.

If my husband had some education our condition would have been better (Urban, older)

The account of a woman who had arrived in the capital to escape an abusive marriage sheds further light on how a lack of education is seen as barrier to achieving wellbeing.

Muhsina regrets that she was unable to continue her schooling. She went on and described the considerable difficulties that she had faced o arriving in Dhaka as an uneducated woman… how on several occasions she had been threatened and taken advantage of because of being unable to read certain documents or access information (Urban, older)

For respondents in the rural site education not only endows a person with knowledge and skills to improve the material condition of their household, it is a form of symbolic capital which individuals and households can use to elevate their position and signal their advancement.

My father-in-law was one of the first to matriculate in this village. People come to him whenever there is a decision or dispute, or if they need help. That is why he could do so well in business and prosper. This families condition is good. My husband is a graduate and works as a medical representative, with his job and the business we are in a better position than others. (Rural, younger woman)

The excerpt above suggests that education is seen as endowing a person with good moral judgement, so that they are regarded as being trustworthy and justified. There is a widespread understanding that education means that a person will know the difference between right and wrong. (neyee,annayee parthakya),

Muhsina also emphasised that her first husband, though wealthy and influential in his locality, was uneducated (oshikkito). She implied that this was why he lacked any moral scruples and was able to be involved in criminal activities and to mistreat her in the way that he had. (*Urban, older)*

8.2.2 EDUCATING CHILDREN: 'MAKING A HUMAN', AND IMPROVING PROSPECTS FOR THEIR FUTURE WELLBEING

It is not enough for children to be just adequately clothed and fed. Women were also conscious that children should be raised to fulfill their potential by sacrificing and investing in their future.

The terms used when speaking of bringing up children include *manush kora* (making a human) and *adab khayda shikano* (teaching courtesy, respect and etiquette). Women in rural and urban settings regard the education of children as an important component of successful upbringing, and instrumental in equipping children to achieve future wellbeing.

The emphasis in urban slum areas was on education as a means for children, both boys and girls, to improve their prospects for a better life. This would include opportunities for better paid employment as well as improved marriage prospects. There is also an expectation that in later life children will support their parents.

> *Without education you cannot do anything good. But if you have some education – even a little bit- you can do many things. …Girls can get a job in the garments as an operator.(Urban, poor)*

> *For sons… being educated means that they do not have to labour so hard (khate hobe na)(Rural, poor)*

One of the barriers to educating children in urban *basti* areas would be a shortage of accessible schools (Rashid and Hossain, 2005). In addition, the extent of poverty means that the opportunity cost of children attending school in high (Cameron, 2010). Only the poorest of households will choose to depend on their children's labour to maintain current consumption.

> *I am willing to eat less… and spend on my son's education so that he can become established (Urban, poor)*

Data from around the time that this study was conducted suggested that by the age of 14 years more children were working than were studying (45.2% vs. 39%) in the slums of Dhaka (UNICEF, 2009). The lucrative opportunities in the garments factories for adolescent girls, mean that parents will often be the ones making the decision for them to take up employment in the city's garment's factories (Baker, 2007). Importantly, it is common for daughters to be encouraged to take up employment to raise the money for their dowry which will be necessary in order for them to marry. This suggests that parents regard marriage rather than economic solvency as the goal for daughters.

This means that girls are withdrawn from school in order to marry, in a study of 153 married adolescent women in a slum in Dhaka, the average age at which they had married was 13.5 years (Rashid and others, 2004). In addition to tradition and dowry considerations (dowries tend to be smaller for younger brides), poverty and the unsafe environment for girls were cited as reasons for early marriage (ibid.)

In rural areas the education of children is also spoken about in terms of its role in achieving wellbeing but there is a stark difference made between boys and girls. For girls education is exclusively about improving their marriage prospects, and as an adjunct to their informal training at home in preparation for her role as a wife, daughter-in-law and mother and perhaps even to benefit to society as a whole. Noticeably there will be little acknowledgement of how girls as individuals benefit from education.

> *For sons being educated means that they do not have to labour so hard and can have a good income and future (bobishot). And for the girls they can get good husbands who are prosperous (bhalo obostha) and live comfortably… (Rural, better off)*

> *They[girls] understand how to run their households and deal with their marital family (shongshahr kemne korbe …shoshur bari'r shahte chalte) (Rural, better off)*

Prevailing cultural values and norms which govern the movement of females are an obstacle to them obtaining an education. In rural the study site continuing education after the completion of primary school entailed travelling across the river to the nearest high school, or to a village about two kilometres away. This meant leaving the *para* and passing by market places, tea-stalls and other public areas, where they could be accosted by unknown men. For the parents and guardians of girls, this scenario presents a risk to the *man shoman* (honour/prestige) of the family. Generally, a small number of girls from only the wealthier families would be seen travelling in covered rickshaws from their homes to the high school in the adjacent village. The expense of travelling by rickshaw is likely to be an additional obstacle to education. Older male children from some of the better off families were studying at colleges within Sylhet town, or at the university. I came across one family whose two daughters stayed with a *Chacha* (paternal uncle) in Sylhet town in order to attend college. Such an arrangement would only have been available to the wealthiest of families.

For the wealthier families being able to bring an educated bride for an educated son is a source of pride and prestige. It signifies that they are keeping up with the times, and reinforces the household's upward trajectory, in reinventing themselves from their former identity as grihasti or land owning families to professional or business holding households (Gardner, 1995). An educated daughter-in-law will manage the household well, will be able to guide children and will also be able to present herself in wider society. However, these aspirations come up against the deeply entrenched, cultural preference for daughter-in-laws to be young and to have had a sheltered upbringing (the underlying desire being for a 'pure' and untouched bride) (Chowdhury, 2016; Rozario, 1998). There's also the assumption that a

younger bride will be more compliant and will adapt more readily to a husband and the marital family (ibid.)[133].

Arranging the marriage of daughters and sons is regarded as an important responsibility which must be fulfilled, if the respect of the family is to be upheld. Parents of daughters are aware of cultural preferences for younger brides, and will not delay in arranging the marriages of daughters.

> *My husband is a graduate, my brother in law is also in University. … I wanted to sit my SSC exam, but I got married before then. My younger sister has good fate (kopal bhala.) She could sit her SSC exam before getting married. (Case study, rural younger)*

> *Muhsina recounted with regret how her parents had chosen to interrupt her schooling and given her in marriage to a much wealthier and older man when she was barely 16 years old. She had wanted to complete her secondary education. At this point Muhsina's mother told me that Muhsina had been very beautiful and that they feared for her safety as long as she remained unmarried. She and Muhsina's father had believed that by accepting this marriage they had ensured that Muhsina would lead a comfortable life. Furthermore, they had two other daughters who were close to Muhsina in age, whose futures they were also worried about. (Case study: urban, older woman)*

Although, increasingly it is acceptable to justify delaying the marriage of a daughter, in order for her to continue her education. This must not be interpreted as education being prioritized over marriage, which is perceived as the only way secure a daughter's future wellbeing, and for her to attain respect and status. Rather educating a daughter, to a certain level at least, means improving her marriage prospects, and equipping her to be successful in her roles as a wife and mother.

8.2.3 EDUCATION FOR WOMEN: TRANSGRESSING NORMS AND CHANGING THE NARRATIVE

In the life history interviews I also came across interesting examples of where being education had allowed women to transgress the cultural norms which dictate what is appropriate for women in terms of their behaviour and roles.

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[133] Increasingly, there will be tensions between the attributes that young men desire in their wives, and what their guardians will prefer.

For Ranee, a recent widow in the rural site, left with two dependent children, being educated to HSC level had meant that she had been able to maintain her independence by taking over the running of a business left by her husband. Her status as an educated woman had meant that she had been able to overcome the disapproval of others in the family and the community.

> *She knew that the employee was stealing money … she thought, 'Why shouldn't I manage the shop myself. This was my husband's shop- and it is something I should hold onto for my son,'. People told her that she couldn't do it – that going to the bazar and sitting in the shop would bring shame on the bari…. Now people say that she did a good thing, though some still talk [say bad things] behind her back. (Case study: Rural, older woman, better off).*

For another woman in the urban site, being educated and holding a salaried job meant that she had had been able, to some extent, overcome some tragic and stigmatising aspects of her life.

> *Polly was rescued from a brothel as a child by an NGO, and had been placed in a girls home and sent to school. She had managed to study to Class 8 and was offered a position as a community health worker. Polly has been married for over eight years but does not have any children, this is a constant cause of pain for her. But she is happy because her husband is a good man and they have a good relationship. Her job means that she is well known and respected throughout the bustee. (Case study: Urban, younger woman)*

Polly's early experience in the brothel could have been a source of immense shame, and could also have resulted in her being ostracised by other women. In addition, she was childless. Poor childless women in Bangladesh experience strong stigma in society, as their identity is devalued due to their inability to produce children (Nahar and Geest, 2014; Nahar and Richters, 2011).

For Polly, however, her educational attainment and her employment had enabled her to create an alternative narrative of her early life experiences, and her own identity; one in which she had overcome great difficulties to become successful. Her position in the community also meant that she had been able to counter many of the negative consequences that are often associated with childlessness such as social isolation, impoverishment, abandonment and a lack of self-esteem (Nahar, 2012; Nahar and Richters, 2011).

8.2.4 SUMMARY

The discussion regarding how education is perceived as being related to wellbeing reveals an intricate web of linkages. On the one hand education is valued for its instrumental value in improving livelihood and employment opportunities. It is this aspect which is emphasized by the urban respondents. In rural settings, on the other hand, educational attainment is also valued as symbolic capital and a source of prestige and a marker of a family's advancement.

The education of children is an important part of successful upbringing. In all cases educating children is valued for its role in improving the prospects of children. While the understanding in the urban site is that education is a route to better paid employment, Ideas regarding the function of education for children varies somewhat between urban and rural respondents and poorer and better off respondents, and also whether it is the education of sons or of daughters that is being considered. In both settings, and for both sons and daughters, education is a means of achieving material wellbeing. For male children the route being through employment opportunities. For daughters, however, education is seen as a means of improving their marriage prospects. In addition, in the rural site, there will be a greater emphasis on education endowing children with good moral character, and knowledge of how to conduct themselves when dealing with others, reflecting the greater importance of the families standing in the community.

9 CONCLUSION

9.1 RESEARCH AIMS AND OVERVIEW OF STUDY

The principal contribution of this thesis is methodological in that its objective is to:

> *develop and validate a socially and culturally relevant, individualized measure of subjective QoL, the Bangladesh Goal Attainment instrument (BGA), applicable to women aged between 20 and 45 years of age residing in Bangladesh.*

The resulting instrument, the Bangladesh Goal Attainment (BGA) instrument, is the first multidimensional and standardised instrument to have been developed to measure the perceived QoL of women in Bangladesh with different socio-economic characteristics and across different locations.

The Wellbeing in Developing Countries Project's definition of subjective quality of life (QOL), underlying the design of the BGA, is as follows:

> *'the outcome of the gap between people's goals and perceived resources, in the context of their culture, values, and experiences of un/happiness'.*

Accordingly, the final BGA instrument consists of a list of goals that represent the facets or aspects of life which are important for the quality of life of women in Bangladesh. Respondents are required to 1) rate their satisfaction with each goal item using a five-point scale and 2) rate how necessary the item is for their wellbeing using a four-point scale. The measurement of perceived QoL may be in terms of satisfaction ratings, or necessity weighted satisfaction ratings, enables the calculation of the gap between goals and goal satisfaction referred to in the WeD definition of QoL.

The BGA instrument was field tested in two different sites in Bangladesh: an urban slum in the capital Dhaka, and a rural area in Sylhet, a Northern district about 250 km away from the capital city. Development and field testing of the BGA in these different settings was conducted to demonstrate its suitability for use in different settings in Bangladesh. That is, to demonstrate that it can address the specific concerns of different women living in very different circumstances in Bangladesh. Exploratory factor analysis of the goal satisfaction data was used to derive multidimensional scales, to assess the perceived QoL of women in different contexts in Bangladesh.

Table 60 shows the three instruments which have been developed and their constituent sub-scales. These measure specific dimensions of perceived QoL which are relevant to the context and would not necessarily be found in other settings, or in a scale developed for both men and women (for example, family respect and honour):

Table 60 Measures of perceived QOL, and constituent sub-scales

BUGS **Bangladesh Unweighted Goal Satisfaction scale**	**RUGS** **Rural Unweighted Goal Satisfaction Scale**	**DUGS** **Urban Unweighted Goal Satisfaction Scale**
Daily living conditions	Wealth and day-to-day life	Close family relationships
Community participation and connections	The community and the family	Family respect & Honour
Close family relationships	Close family relationships	Daily living conditions
Capabilities of family members	Local services	Wealth
Wealth		Community participation and connections
Local services		

9.2 PSYCHOMETRIC VALIDITY OF THE BANGLADESH GOAL ATTAINMENT (BGA) INSTRUMENT

Content validity, i.e. that the goal items included in the instrument encompass all aspects of life which are relevant for women's wellbeing, and face validity, i.e. whether the scale items appear to be measuring what the scale intends to measure (Streiner and Norman, 2008), are built into the BGA through the choice of appropriate items. In order to achieve content and face validity I employed a multi-method approach employing both qualitative and quantitative methods throughout the development and refinement of the BGA instrument.

The initial pool of goal items for inclusion in the BGA instrument was generated drawing on existing literature and my own quantitative and qualitative research with Bangladeshi women in this age group. The pool of items was reviewed by an expert panel and women representing the target respondents who participated in focus group discussions and individual interviews employing cognitive interviewing. As part of these exercises the experts and the representatives of the respondents were asked to suggest any further items that should be included in the BGA. The findings from these exercises indicate that the goal items necessary to cover the complete domain of perceived QoL were already included in the BGA. The resulting goal content of the BGA instrument reflects the importance of material comforts, experiences of health, relationships with family members and community participation.

The results of the field testing in two different sites in Bangladesh also support the content and face validity of the BGA instrument. In both sites there were very few non-responses to the satisfaction question and necessity questions, when the instrument was interviewer administered (with the exception of items relating to children, due to the age of the respondents, as discussed in 9.4). The frequency analysis and examination of the mean scores of both necessity and satisfaction ratings also suggests that the BGA instrument has good content and face validity in relation to the goal item content, and the respondents' understanding of the response scales. Further evidence for content validity is provided by the high proportions of the items described as 'necessary' or very necessary' in both sites (see Chapter 6). In the rural (Sylhet) site all the items were rated as either 'necessary' or 'very necessary' by more than 50% of the sample respondents. In the urban slum site (Dhaka) 66 of the 74 items were rated as 'necessary' or 'very necessary' by more than 50% of the respondent (the exceptions included a small number of items which are clearly more relevant to rural inhabitants, supporting the value of context-specific measures). Variation in satisfaction response patterns for the different items indicates that the items are able to discriminate between respondents with low and high levels of satisfaction. Similarly, the variation in necessity response patterns suggests that the measure is able to capture differences in goal priorities.

Factor analysis, using principal factor analysis (PFA), of the goal satisfaction data and necessity weighted satisfaction data of the combined data (urban and rural) and the urban and rural separately reduces the goal items to a smaller number of summary variables or factors. These factors are taken as representing underlying dimensions of QoL (as shown in Table 60). Factor analysis of the combined data produced a Bangladesh six-factor structure, where each factor reflects an underlying dimension of QoL. The six dimensions are consistent with my understanding of the context, the circumstances of the sample respondents, and how they evaluate their lives, shaped by an extensive literature review and primary data collection. More importantly, I felt that the factors represented dimensions of QoL which were relevant to women in both the sites, regardless of their overall socio-economic background, although the underlying meaning of these dimensions may differ between the two sites (e.g. see 7.2.2 for a discussion of the meaning of the 'Community participation and connections' dimension in the rural and urban site). Derivation of a common structure enables comparisons to be made between the respondents in the two sites.

I also conducted factor analysis to derive site specific structures, which resulted in an urban five-factor and rural four-factor structure. These factor structures provided a more nuanced understanding of the dimensions of QoL within each site.

Factor scores (mean scores of contributing items) were computed. Convergent validity, the degree to which factor scores are related to scores on an instrument measuring a related construct, was evidenced by the significant and moderate correlations between the BGA dimensions and scores of the generic Satisfaction with Life Scale (SWLS) (Diener et al., 1985). Factor scores also differed by socio demographic and economic characteristics of the respondent and their household. In multiple regression household level indicators of material and social advantage had a positive relationship with factor scores.

Even though individualised scores have intrinsic appeal, the findings suggest that weighting and individualisation of satisfaction scores did not markedly alter the factor structures, nor did it result in an improvement in the actual measurement of perceived QoL.

9.3 FURTHER CONTRIBUTIONS OF THE THESIS : METHODOLOGICAL, EMPIRICAL, AND CONCEPTUAL

In developing and validating the Bangladesh Goal Attainment (BGA) instrument the thesis also makes several other contributions.

Empirically the field testing of the BGA instrument, in the two sites, represents the first large scale and detailed study of goal attainment and goal priorities of women (aged 20 to 45 years) in two very different locations in Bangladesh. The findings of the frequency analysis of the goal satisfaction and goal necessity ratings were reported in and discussed in Chapter 6.

Methodologically the results of the initial analysis of this data reported in Chapter 6 illustrated how the data could be utilised to provide a detailed inventory of goal satisfaction and goal priorities for groups and for individuals. The elicitation of both satisfaction ratings and importance ratings for a large and varied number of goals means that the BGA instrument bridges the gap between traditional survey approaches which are often limited in focus and cannot capture differences between members of the household and more expansive qualitative methods which are able to capture detail. As an individual multidimensional QoL measure, the BGA has several advantages over previous participatory, qualitative methods: it will be less time consuming to administer, requiring less experienced data collectors, reducing costs and respondent burden. The BGA can also be readily added onto existing household surveys, for administration to representative samples, and the data generated is amenable to statistical analyses. The data generated by the BGA instrument can be used to make comparisons between groups and individuals in goal satisfaction and goal priorities, as well as track changes over time (for both groups and individuals) . In addition, I also illustrated how the scores can be used to identify prioritised goals which are being satisfied, and conversely shortfall in the satisfaction of valued goals.

Conceptually, factor analysis of the goal satisfaction data enabled me to reduce the goal satisfaction data into a smaller, more manageable, and more easily understood factors or underlying dimensions of QoL. When considering the factor structures for the two different sites, the dimensions of QoL which have been identified offer a more nuanced understanding of the significance of different goal items, and the interrelationships between different goal items, for the construction of perceived QoL. For instance, the urban 'Family Respect and Honour' and the rural. 'The community and the family' dimensions are examples of QOL dimensions, which are specific to the context of the respective sites (the significance of these dimensions was discussed in section 7.3). This enables a more rounded and specific conceptualization of women's wellbeing in these settings.

9.4 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The BGA instrument was validated in two very different sites in Bangladesh, in order to demonstrate the applicability of the instrument to women residing in very different contexts and socio-economic circumstances. The two sites, an urban slum in Dhaka and a rural site in Sylhet are by no means 'typical' urban and rural sites. In particular, Sylhet is a region with a long history of migration overseas; as a result, it is a common occurrence for households to have been recipients of remittances from abroad in the past or in the present. Furthermore, neither of the samples can be described as representative of the population within each site. However, the known sample characteristics suggest that the sample respondents in each of the sites is reasonably diverse; that is, while the women represented in this study are generally of low socio-economic status and low levels of literacy, there is variability in these factors and also in age. As a result, the models of QoL (in terms of the underlying dimensions) derived through the factor analysis provide insight into the conceptualization and achievement of wellbeing for poorer women in rural and urban locations in Bangladesh.

In this study factor analysis of the combined urban and rural data to derive a common factor structure resulted in a six-factor structure which I felt to be a suitable representation of dimensions of QOL which are relevant to women in both sites, and to women of varying socio-economic status. However, I also went on to derive site specific factor solutions which resulted in some very different dimensions of QoL emerging.

In future studies it would be possible to test the suitability of the BGA instrument with respondents from a broader range of socio-economic statuses. Specifically, whether the instrument is applicable to respondents who can be classified as non-poor or middle class. There is also scope for testing whether the existing BGA is also applicable to women of a wider age range; specifically, women over 45 years of age who represent women at a different life stage, and, bearing in mind the prevalence of early marriage in Bangladesh,

women aged 15-19. In both cases this would entail determining whether the current goal content is appropriate, this would necessitate further qualitative study.

An additional aspect of this would be to test the robustness of the six-factor BGA structure for women of different socio-economic statuses and ages, i.e. whether the six dimensions of QoL identified in the PFA are consistent with how women of a different life stage and who are better off, think about and evaluate their lives. Determining this would benefit from qualitative exploratory work to gain an understanding of how women in these different groups conceptualize wellbeing.

Further studies with women of different backgrounds would also mean that population norms for scores on the BGA could be determined. Having cut-off points for sub-optimal quality of life through the generation of population norms would enable researchers to quickly identify groups, or individuals, experiencing poor quality of life.

An issue which needs addressing is the omission of items relating to children in the factor structures. Having children, bringing them up well, and their achievements are undoubtedly an important aspect of women's lives in Bangladesh. The problem arose from the large number of missing responses to questions relating to children (such as children's achievements) as a large number of respondents had stated that they were unable to answer these questions as they did not have children, or because their children are too young. To retain the items, for the subsequent principal factor analysis, the missing values were replaced with the series mean. This meant that the responses to this related group of items were then highly correlated, it also reduced the variance in the responses. This is a problem when conducting any form of factor analysis, as a range of responses is required to analyze the variability between people.

It may be possible to address this problem by wording the items relating to children in capacity terms in order to reduce the number of missing responses. Another approach would be to develop a standalone subscale which could be administered only to those women who have children, and whose children are old enough for their achievements etc. to be considered.

Other items which are undoubtedly important to women for women's wellbeing, such as health of self and health of family members, were also not represented in any of the factor structures. Health of self was ranked 9th and 11th in terms of necessity in the urban and rural site respectively. Similarly, health of family members was ranked 12th and 15th in the urban and rural site respectively. Although a perusal of the satisfaction ratings indicate that the responses encompass the full range of responses in both sites, they may also have been omitted from the final factor solutions due to insufficient variability in the responses.

Similarly, the factor structure of the urban data did not include a 'local services' dimension, presumably because there was little variation in the satisfaction ratings for items such as health services and government services. These two examples illustrate the danger of relying solely on the factor structures to understand the important dimensions of QoL, without reviewing the actual goal satisfaction and goal necessity data.

In Chapter 6, when examining the satisfaction and necessity ratings, I also suggested that adaptation may explain some of the differences in goal priorities and goal satisfaction between the two sites. Respondents in the rural site are generally better off socio-economically, and thus better placed to achieve all the goals. As a result, the perceived necessity of a greater number of goals is higher for the rural respondents. Women in the urban site are far poorer and by implication may be less able to achieve their goals. This means that adaptation processes result in a downward adjustment of the perceived necessity of goals, as evidenced by the lower mean necessity scores for each goal item. Further research to understand the how the underlying processes of appraisal (e.g. standards of comparison) differ across respondents and how these affect how they respond to QoL questions, and what the implications are for subjective measures is important.

Another issue is how social desirability biases may impact upon satisfaction and necessity ratings. In both sites the responses indicated high levels of satisfaction and high levels of necessity regarding close relationships, particularly the relationship with husbands. The mean scores for the close relationships dimensions of perceived QoL were also very high, above the overall means. It would be an error to assume that this means that the respondents were very satisfied with the family lives. The high scores may reflect what the respondents felt were appropriate responses, given the centrality of the family to local values. Qualitative studies would be able to throw light on such issues. Further validation studies should also examine the test-retest reliability and responsiveness of BGA scores.

9.5 KEY FINDINGS AND IMPLICATIONS FOR DEVELOPMENT RESEARCH AND PRACTICE

In developing and validating the BGA instrument I followed standard procedures in developing measurement instruments for psychological constructs such as personality traits and health related QoL instruments. However, in contrast to those constructs, which are narrowly defined and specific, the definition of perceived QoL underlying the BGA's instrument is far more expansive and shaped by the context and the characteristics of target respondents. This is clearly shown by the derivation of the site-specific factor structures, which differed considerably between the two sites.

Reflecting on what the findings of this study mean for development research, the development of the BGA presents a means of summarizing the complex relationships between goal satisfaction and material resources. It provides a model to aid our understanding of how and why QoL is experienced in a particular context. The large sample sizes and somewhat complex statistical analysis required to derive models of perceived QoL and scales for measurement means that development practitioners would be unlikely to undertake this task, however, they can now draw on a bespoke measure to capture female QoL in Bangladesh.

The BGA scores, both Bangladesh and site-specific scores, have a positive relationship with material and social circumstances of the respondents and their households. However, the findings from the multiple regression analysis also indicate that it is not only material and social advantage at the household level which determines the perceived QoL of women. On the one hand this suggests that the impact of development activities solely focused on the economic empowerment of women may have a limited impact. It also indicates that women cannot be considered as homogenous and isolated entities.

Local understandings of wellbeing offer an important alternative perspective when designing development interventions. This point is related to the previous one in that the success of any development intervention is subject to its relationship to local understandings of wellbeing. The site-specific factor structures indicate that each site has a distinctive local understanding of quality of life and of the desired relationships amongst people. For development interventions to be effective in a location, an understanding of the local context and how quality of life is constructed is important, particularly how different aspects of life may be inter-related. The models of perceived QoL which have been developed as part of this project are of use as a framework to aid the understanding of QoL as a multi-dimensional construct within a particular context. When considering the design of an intervention, practitioners can refer to the models to aid their understanding of the relationships between different aspects of life, so that any adverse impacts can be minimised.

Qualitative approaches improve the understanding and interpretations of quantitative measures of subjective QoL. The use of quantitative measures enables us to identify broad patterns across groups of people, such as the relationship between material and social advantage and BGA scores discussed above. In order to better understand what these scores actually mean, for a particular group or a particular site, a grounding phase using qualitative methods is invaluable. For instance, in the previous section I discussed the possibility of social desirability influencing goal satisfaction and goal necessity ratings. Incorporating a qualitative component at various points enabled me to identify and explore these influences.

9.6 OVERALL CONCLUSIONS

In relation to the primary aim of the thesis, the Bangladesh Goal Attainment instrument is a psychometrically valid measure of the perceived QoL for women in Bangladesh

Researchers and practitioners can use the BGA instrument to analyse and compare how women experience and evaluate their lives in a practical and rigorous way. The instrument can be used to assess multiple aspects of quality of life in different settings; however, as quality of life is a contextual construct, further work is required to assess the psychometric properties of the BGA in different contexts within Bangladesh.

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APPENDICES

A. RESULTS OF INITIAL GOAL ITEM POOL GENERATION

		QoL Phase 1 rural your	Choudhury(2004)	Skevington	Khatun
1. ASPECTS OF THE HOUSEHOLD					
Essentials /					
1	adequate housing (good quality, sufficient size)	*	*		
2	Access to electricity(quality of service i.e. regular, access, cost, reliability)	*	*		
3	access to clean, safe water	*	*		
4	income sufficient to meet households needs	*	*		
5	daily food	*	*		
6	adequate clothing	*	*		
7	sanitary latrine	*	*		
8	Having the necessary household items needed for day to day living (furniture, pots pan)	*	*		
Assets/					
9	household having its own means of transport	*	*		
10	Household own its own dwelling/ house	*	*		
11	Being able to save money for the future	*	*		
12	Household owning land	*			
13	Rearing animals	*			
14	owning a telephone	*			
15	Food production for own consumption	*			
Income					
16	Does your family own any businesses	*			
17	Is your family able to save money for the future	*			
18	Does your family have savings	*			
19	Does your family own any businesses	*			
20	Do any earning members of your household hold salaried jobs	*			
21	Does your husband/ household head hold a salaried position	*			
22	All members of your family are gainfully employed	*			
23	Do you have access to credit and loans on reasonable terms	*			
Non					
24	Your family able to eat the food it chooses (ENJOY FOOD)	*			
25	You are able to live in style (pospase thaktehr parehn)	*			
26	Your household able to purchase luxury goods (TV/ radio)	*			
27	Is your family able to appear well- dressed, i.e. fashionable	*	*		
28	Do you live in a good clean environment re, homestead and surrounding area	*			
29	Does your household own a telephone	*			
Human					
30	Is your husband fit and well	*			
31	Your husband is educated	*			
32	Are children fit and well	*			
33	Are you fit and well	*			
34	Are the members of your household fit and well	*			
35	Are the members of household educated	*			
36	Are your children educated	*			
Attributes					
37	Are the members of your household hard working	*			
38	Is your husband responsible and hardworking	*			
Family life					
39	Your family life is peaceful	*			
40	the members of your family live together happily	*			
41	the members of your extended family support and guide one another	*			

Bringing up children well					
42	Are your children being educated	*			
43	Are your children happy		*		
44	Are you able to secure good marriages for your children	*			
45	Are you able to provide religious education to your children	*			
46	Are you able to provide a good family environment to your children	*	*		
47	Are your children good and moral	*			
48	Are your children accomplished	*	*		
Connections					
49	Your household has access to influential persons	*			
50	Members of your household participate in community level organisations	*			
51	A member of your household holds a position of authority	*			
52	Your household is respected in the community	*			
53	Does your household have good relations with others in the community	*			
54	Do you feel safe and secure in your community	*			
55	You will receive from the community of there is a disagreement (i.e. shalish if dispute)	*			
56	You will receive support form community/ neighbours in times of need (if e.g. fire destroys	*			
57	Members of your household contribute to the development of the community (material or	*			
2. ASPECTS OF AREA OF RESIDENCE (services / infrastructure)					
58	Are you able to access good health-care provision for your family (service aspect)	*			
59	Are you able to access good schools for your children	*			
60	Are there good markets nearby at which you can sell produce	*			
61	Are there adequate markets nearby to meet your daily needs	*			
62	Is your area well connected to administrative and commercial centres through good roads	*			
63	Are you able to access government services	*			
64	Are members of your family able to access NGO services	*			
65	Does your area have a good and just leadership	*			
3. ASPECTS OF THE INDIVIDUAL					
Own assets					
67	Do you own jewellery	*			
68	Do you have your own independent income	*	*		
69	Do you have your own wealth / property	*	*		
Physical					
70	Do you feel safe and secure within your home	*			
71	feeling safe when moving around your community	*			
72	being able to eat, sufficient food of good quality (you yourself)	*			
73	Are you in good health	*			
Pleasures					
74	Are you able to dress well	*	*		
75	Are you able to appear well, look attractive	*	*		
76	Are you able to maintain personal hygiene	*	*		
77	Do you have soap and oil/ cosmetics that you need	*	*		
78	Are you able to eat the food you choose	*			
79	Do you have opportunities for relaxation and leisure	*			
Relationship					
80	Do you have an affectionate and close relationship with your husband	*	*		
81	Is your husband attentive and considers your needs and wants	*	*		
82	Does your husband encourage and support you	*	*		
83	Does your marital family have good relations with your natal family?	*			
84	DO you have close relationships with your children	*	*		
85	the respect and regard (and affection) you receive from members of your marital family i.e.		*		
86	the respect you personally receive from neighbours or community members				
87	the respect your household receives form neighbours and community members		*		
88	Do you feel as though you invaluable to your household	*	*		

Support					
89	Do members of your extended marital family support and help you with your daily activities				
90	Do elders or members of the extended marital family offer you good advice and guidance	*			
91	Do you receive support form your natal family				
92	Will you supported by family members in times of need (material or otherwise)				
93	the support from neighbours, community members in times of need	*			
94	Will you natal family offer you support in a time of need	*			
Accomplish					
95	Are you able to contribute to the development or income of your family		*	*	
96	Are you able to contribution you make to natal family's wellbeing (material or otherwise)		*		
97	Are you able to read and write?	*	*		
98	Are you able to fulfil your role as a mother and wife well		*		
99	Are you skilled in household work				
100	Are you able plan and run your household well (shongshahr chalanoh)		*		
101	Are you bale to take good care of your husband		*		
102	Are you able to take care of your children	*	*		
103	your ability and role in disciplining and guiding your children,		*		
Autonomy					
104	Are you able to make the decisions regarding how your wealth (money or any assets) is				
105	Are you baling to make decisions regarding family planning?				
106	Are you able to access information regarding services and health facilities				
Participation in decision making					
107	to have information regarding services and facilities i.e. health services, training opportunities				
108	Do you participate in decisions regarding household expenditures				
109	Do you participate in decisions regarding your children's future (marriage, education etc)				
110	the recognition or acknowledgement you receive form your husband in households decisions				
111	your participation in matters of your family		*	*	
Connections / and regard					
112	Do you have opportunities to form friendships or spend time with people outside of your family	*			
113	Are you able top offer help or support top people outside of your family	*			
114	DO you have a someone whom you can confide in and turn to for advice	*			
115	Are you able to access the information you need re. health care or training opportunities	*			
116	DO you know about life outside your village	*			
117	Are you able to access NGO services such as credit facilities or training or educational	*			
118	Are you always able to obtain healthcare that is suitable for your needs	*			
119	Are you able to go to the market to make purchases r visit friends and relatives,				
120	Are you able to visit friends and relatives by yourself				
121	Are you free to leave your homestead				
122	relations with natal home	*	*		
Psychological / attributes of the self					
123	Are you able to practice religion to your satisfaction?	*			
124	Are you free of worries	*			
125	Are you confident that you will be taken care of in your old age?				
126	Do you feel that you have Allah's blessing?				
127	Are you a good and moral person	*			
	Are you happy				
	Are you satisfied/ content				
Personal growth					
128	Do you feel as though you are able to develop yourself?			*	
129	Do you feel as though you are able to learn new things			*	

B. EXPERTS CONSULTED DURING SCALE DEVELOPMENT

		Completed Evaluation form
Abbas Bhuiya	ICDDR,B	
Ayesha Begum	ICDDR,B	*
Farhana Urni	ICDDR,B	*
Jalal Choudhury	BRAC	
Jesmin Khan	ICDDR,B	
Ashraful Alam Neeloy	ICDDR,B	*
Papreen Nahar	ICDDR,B	
Ruchira Tabassum Naved	ICDDR,B	
Sabrina Rasheed	ICDDR,B	*
Shaila Mahmood	ICDDR,B	*
Sharful Islam Khan	ICDDR,B	
SMA Hanifi	ICDDR,B	*
Tamanna Sharmin	ICDDR,B	*
Wasima Choudhury	FIVD,B	

The following list of goal items are being considered for inclusion in a scale to assess goal attainment as a measure of subjective quality of life for women aged between 20 and 45 years residing in Bangladesh.
Please indicate for each item how relevant it is for measurement of subjective quality of life.
Since the aim is to reduce the number of items, please indicate items that may be dropped, with an explanation.
If you think that an item should be phrased differently please also indicate this and if possible suggest an alternative phrasing.
Are there any other areas that you think should be covered?

	1 Not relevant	2 somewhat relevant	3 quite relevant	4 very relevant	Comments or suggestions in terms of items that mya be dropped, or which would beneift from rephsaing
1. ASPECTS OF THE HOUSEHOLD					
Essentials / Basic needs					
1 adequate housing (good quality, sufficient size)					.....
2 Access to electricity(quality of service i.e. regular, access, cost, reliability)					.....
3 access to clean, safe water					.....
4 income sufficient to meet households needs					.....
5 daily food					.....
6 adequate clothing					.....
7 sanitary latrine					.....
8 Having the necessary household items needed for day to day living (furniture, pots pan)					.....

Are there any other areas that you think should be covered? If so would you also suggest a wording for any item (s) to cover this area.

.....
.....
.....
.....
.....

D. SUMMARY OF RESULTS OF EXPERT PANEL REVIEW

		1	2	3	4	Item -CVI		
		Not relevant	hat relevant	quite relevant	very relevant	Item -CVI	DROP /REPHRASE	Additional comments
1. ASPECTS OF THE HOUSEHOLD								
Essentials / Basic needs								
1	adequate housing (good quality, sufficient size)				7	1.00		
2	Access to electricity(quality of service i.e. regular, access, cost, reliability)				7	1.00		
3	access to clean, safe water				7	1.00		
4	income sufficient to meet households needs				7	1.00	R	rephrase as just income
5	daily food			2	5	1.00		
6	adequate clothing			4	3	1.00		
7	sanitary latrine		2	4	1	0.71	R	should this just be phrased as 'latrine' without the specification of sanitary
8	Having the necessary household items needed for day to day living (furniture,					0.00		
Assets/ means of production								
9	household having its own means of transport	1	3	3		0.43	D	? How relevant is this, especially in urban areas
10	Household own its own dwelling/ house			2	5	1.00		ownership , very few in urban will have this
11	Being able to save money for the future			4	3	1.00		saving money- rephrase
12	Household owning land			4	3	1.00		land ownership- rephrase
13	Rearing animals		4	3		0.43		do women think at this level, only relevant for rural dwellers
14	owning a telephone		2	4	1	0.71		mroe relevant in urban setting perhaps
15	Food production for own consumption	2	4	2		0.29	D	more relevant in rural areas
Income flows								
16	Does your family own any businesses		2	3	2	0.71	R	overlap with 19 , rephrase
17	Is your family able to save money for the future			3	4	1.00	R	overlap with 18, combine
18	Does your family have savings			3	4	1.00		
19	familys involvement in businss		2	3	2	0.71		
20	Do any earning members of your household hold salaried jobs		2	4	1	0.71	R	overlap with 21, combine
21	Does your husband/ household head hold a salaried position		2	4	1	0.71		
22	All members of your family are gainfully employed		3	3	1	4.00		children in education?

23	Do you have access to credit and loans on reasonable terms		2	2	3	0.71		
Non essential (a pleasurable life)								
24	Your family able to eat the food it chooses (ENJOY FOOD)		3	3	2	0.71	R	food overlaps with other questions
25	You are able to live in style (pospase thaktehr parehn)	1	3	3		0.43	D	very ambiguous....not a good question
26	Your household able to purchase luxury goods (TV/ radio)	2	3	2		0.29	D	convenience goods, modern goods for life
27	Is your family able to appear well-dressed, i.e. fashionable		2	4	1	0.71	R	rephrase- clothing
28	Do you live in a good clean environment re, homestead and surrounding area			3	4	1.00		
29	Does your household own a telephone			5	2	1.00	D?	convenience good?
Human resources								
30	Is your husband fit and well				7	7.00	D	combine questions re. Health, And husband
31	Your husband is educated			5	2	7.00	D	q re. Education of family
32	Are children fit and well				7	7.00	D	combine questions re. Health of different family members
33	Are you fit and well				7	7.00	D	overlaps
34	Are the members of your household fit and well					0.00	D	many items re. Education, combine?
35	Are the members of household educated					0.00		
36	Are your children educated			2	5	1.00	D	q re. Education of family
Attributes of household members						0.00		
37	Are the members of your household hard working			2	5	1.00		37, 38 - is it necessary to ask this seperately
38	Is your husband responsible and hardworking							
Family life								
39	Your family life is peaceful			1	6	1.00	D	overlap with family relationships
40	the members of your family live together happily				7	1.00	D	overlap with family relationships
41	the members of your extended family support and guide one another			2	5	1.00	D	overlap with family relationships
Bringing up children well								
42	Are your children being educated			2	5	7.00	D	family education, childrens upbringing
43	Are your children happy			4	3	7.00	D	childrens upbringing?
44	Are you able to secure good marriages for your children		2	4	1	5.00	D	too specific

45	Are you able to provide religious education to your children		3	4		4.00	D	childrens upbringing?educn
46	Are you able to provide a good family environment to your children			4	3	7.00	R	vague
47	Are your children good and moral			2	5	7.00	R	good children
48	Are your children accomplished			2	5	7.00	D	chidlrens educ
Connections								
49	Your household has access to influential persons		4	3		0.43	D	good leaders
50	Members of your household participate in community level organisations		4	3		0.43	D	
51	A member of your household holds a position of authority		4	3		0.43		items 51 and 52 are the same drop one
52	Your household is respected in the community		2	3	2	0.71	D	overlap with good leaders or accesss to infleuntials
53	Does your household have good relations with others in the community		1	4	2	0.86		
54	Do you feel safe and secure in your community				7	1.00		security
55	You will receive from the community of there is a disagreement (i.e. shalish if		2	4	1	0.71		55,56 - rephrase this to encompass both senses
56	You will receive support form community/ neighbours in times of need		2	4	1	0.71		
57	Members of your household contribute to the development of the community (	2	4	3		0.43		
2. ASPECTS OF AREA OF RESIDENCE (services / infrastructure)								
58	Are you able to access good health-care provision for your family (service aspect)			4	3	1.00		
59	Are you able to access good schools for your children			4	3	1.00		
60	Are there good markets nearby at which you can sell produce			4	3	1.00		60, 61 combine
61	Are there adequate markets nearby to meet your daily needs			4	3	1.00		
62	Is your area well connected to administrative and commercial centres		4	2	1	0.43		will women recognise this
63	Are you able to access government services		4	3		0.43		govt services is very ambiguous
64	Are members of your family able to access NGO services		3	3	1	0.57		ngo services is very ambiguous
65	Does your area have a good and just leadership		3	4		0.57		
						0.00		
3. ASPECTS OF THE INDIVIDUAL						0.00		
Own assets						0.00		
67	Do you own jewellery	1	3	3		0.43		property & income , also savings

89	Do members of your extended marital family support and help you with your			5	2	1.00	D	repitions, combine, double barrelled
90	Do elders or members of the extended marital family offer you good advice and					0.00	D	double barrelled
91	Do you receive support form your natal family		1	4	2	0.86		overlap with relationship with natal home,
92	Will you supported by family members in times of need (material or otherwise)			4	3	1.00	D	lotsof items regarding support form family , generalise and reduce
93	the support from neighbours, community members in times of need		1	4	2	0.86		
94	Will you natal family offer you support in a time of need		2	4	1	0.71	D	overlap
Accomplishments, role								
95	Are you able to contribute to the development or income of your family			4	3	1.00		duplicate
96	Are you able to contribution you make to natal family's wellbeing (material or	2	3	2		0.29		
97	Are you able to read and write?			3	4	1.00		vague wording
98	Are you able to fulfil your role as a mother and wife well					0.00		
99	Are you skilled in household work		1	5	1	0.86		
100	Are you able plan and run your household well (shongshahr chalanoh)		2	4	1	0.71		vague, alot of questions about the indiviudals abilities here , combien to reduce items
101	Are you bale to take good care of your husband			2	5	1.00	D	overlap with relationship
102	Are_you able to take care of your children			2	5	1.00	D	overlap with upbringing
103	your ability and role in disciplining and guiding your children,			3	4	1.00	R/D	bringing up children
Autonomy								
104	Are you able to make the decisions regarding how your wealth (money or					0.00	D	decision making , quite a specific question
105	Are you baling to make decisions regarding family planning?			2	5	1.00	D	very specific health related question
106	Are you able to access information regarding services and health facilities			4	3	1.00		information possibel overlaps
Participation in decision making				4	3	1.00		
107	to have information regarding services and facilities i.e. health services, training			4	3	1.00		
108	Do you participate in decisions regarding household expenditures			4	3	1.00		
109	Do you participate in decisions regarding your children's future (marriage, education			4	3	1.00		
110	the recognition or acknowledgement you receive form your husband in households			3	4	1.00		
111	your participation in matters of your family			3	4	1.00		
Connections / and regard						0.00		

112	Do you have opportunities to form friendships or spend time with people		4	3	2	0.71	R	rephrase, two qusstions here, ambiguous
113	Are you able top offer help or support top people outside of your family		4	3		0.43		
114	DO you have a someone whom you can confide in and turn to for advice			4	3	1.00		
115	Are you able to access the information you need re. health care or training			3	4	1.00		generalise
116	DO you know about life outside your village		1	4	2	0.86		
117	Are you able to access NGO services such as credit facilities or training or		2	4	1	0.71	R	overlap
118	Are you always able to obtain healthcare that is suitable for your needs			2	5	1.00	R	reprase
119	Are you able to go to the market to make purchases			4	3	1.00	R/D	questions re. Mobility, autonomy?
120	Are you able to visit friends and relatives by yourself		2	3	3	0.86	R/D	
121	Are you free to leave your homestead			4	3	1.00	R/D	
122	relations with natal home			5	2	1.00	D	overlap with asssiting natal home perhaps,
Psychological / attributes of the self						0.00		
123	Are you able to practice religion to your satisfaction?					0.00		
124	Are you free of worries			5	2	1.00		
125	Are you confident that you will be taken care of in your old age?	2	2	3		0.43	D?	future outcome , shoudl this be included
126	Do you feel that you have Allah's blessing?			2	5	1.00	R	v abstract, overlap with question on religion
127	Are you a good and moral person			1	6	1.00		
						0.00		
						0.00		
Personal growth						0.00		
128	Do you feel as though you are able to develop yourself?		2	5		0.71	R/D	128, 129 combine and rephrase
129	Do you feel as though you are able to learn new things		2	5		0.71	R/D	

E. TRANSLATION AND INFERENTIAL DEFINITIONS OF GOAL ITEMS

		Connative/ referential meaning	Translation into Bangla	Back translation
	INCOME /CASH FLOWS			
1	IncomeHousehold	the households income	আপনার পরিবারের আয়	your households income
2	business	how the household/ family is involved in business, this may be as owners, managers, employees, or even investors.	আপনার পরিবার যেভাবে ব্যবসার সাথে যুক্ত আছে	your households involvement in business
3	salaried job	opportunities and holding of salaried positions ie fixed salary employment by members of the family	আপনার পরিবারের সদস্যরা বেতন নির্ভর চাকরী করে	household memebrs hold salraied jobs
4	selfemployment	opportunities and involvement in self employment ie. Owner & driver of an autorickshaw,	আপনার পরিবারের সদস্যরা স্ব-নিয়োজিত পেশার সাথে যুক্ত	household memebrs are self-employed
5	loans	availability of loans and terms of loans from NGOs or financial institutions or private money lenders and the terms (interest payments) amounts available	আপনার পরিবারের ঋণ নেবার সুবিধা	loans/credit facilities
6	Incomepersonal	the respondents personal income from any siource	আপনার ব্যক্তিগত আয়	own income
	LIVING CONDITIONS			
7	Housing	the quality of hte accomodation, ie number of rooms, building materials, space,	আপনার পরিবারের বাসস্থানের অবস্থ	condition of your home/ dwelling
8	SafeWater	the source of water, whether it is safe, uninterrupted , cost	যে বাড়ীতে আপনি থাকেন সেখানে নিরাপদ পানির ব্যবস্থ	the water facilities where you live
9	Food	the type of food that you eat , in terms of quantity, quality, variety, meeting nutritional needs	আপনার পরিবারের সদস্যরা যে রকম খাবার খায়	the kind of food that your family eats
#	clothing	the clothing that the members of hte family wear/ own can mean quantity, havig new cloths, 'fashionable' clothes	আপনার পরিবারের সদস্যরা যে রকম পোশাক পড়ে	the kind of clothes that your family memebrs wear
#	Electricity	having an electric connection, uninterrupted service, costs	যে বাড়ীতে আপনি থাকেন তার বিদ্যুৎ ব্যবস্থ	the electricity facilities of your home
#	Toilet	havign a toilet, numbers of toilets , the type of toilet whether it is sanitary etc, wher eit is locater,	যেখানে আপনি থাকেন সেই জায়গার স্বাস্থ্যসম্মত পায়খানার ব্যবস্থ	toilet of household
#	HouseholdGoods	The household possessions that your family owns (those needed for day to day life e.g. furniture, pots and pans etc)	আপনার পরিবারের গৃহস্থালী সম্পত্তি (যা দৈনন্দিন কাজে লাগে)	
#	Rest	opportunities to rest, having time during the day to themselves, when they do not have to work or attend to household tasks	আপনার বিশ্রাম সুযোগ	
14b	Recreation	opportunities for recreation , whether it be spending time with otherss, or watching TV or going visiting	আপনার বিনোদনের সুযোগ	

	HOLDINGS (Productive assets/ means		**(Productive assets/ means of production and otherwise)**	
#	landholdings	land holdings of hte family, the quality/type of land, location , anticipated value etc	আপনার পরিবারের যে জায়গা-জমি আছে.....	the land that your family owns
#	house ownership	ownership of a dwelling anywhere, quality of hte dwelling they own	আপনার পরিবার কোন বাড়ীর মালিক কি-না.....	whetehr your family owns a house
#	SavingsHousehold	economic savings of the household	আপনার পরিবারের অর্থ সঞ্চয়ের পরিমান.....	how much money savings yoru family has
#	savingspersonal	economic savings pf the individual	আপনার সঞ্চয়ের.....	how much savings you have
#	personal wealth	wealth of th eindividual in any form , land, jewellery, buildings	আপনার ব্যক্তিগত সম্পদ	your own income
#	livestock	livestock holdings, (chickens, cows,)	আপনার পরিবারের যে সব গবাদি পশু আছে.....	domesticated animals that the family has
#	Equipment	productive tools or equipment owned by the household	আপনার পরিবারের উপার্জনের জন্য প্রয়োজনীয় যন্ত্রপাতি যে আছে .	
			(যেমন: কৃষি যন্ত্রপাতি).	
#	Vehicle	the households ownership of a transport vehicle	আপনার পরিবারের নিজস্ব পরিবহনের ব্যবস্থ	own transport
#	FoodProduction	the housheolds food production	আপনার পরিবারের নিজেদের খাবার জন্য যা উৎপাদন করেন	food produced to be eaten by family
#	phone	access to or ownership of a phone	আপনার পরিবারের টেলিফোন বা মোবাইল	the family's telephone or mobile
#	ConvenienceGoods	the convenience goods that you have, modern goods to make your life more easy or enjoyable	আপনার পরিবারের যে সব যেসব বিলাস বহুল জিনিসপত্র আছে আপনার	the luxury goods that your famil has
			জীবনকে আরো সহজ, আনন্দদায়ক করে	
	ATTRIBUTES OF THE COMMUNITY			
#	LocalitySafe	the safety of the place where you live (security, crimelessness)	আপনার এই এলাকা /গ্রামের নিরাপত্তা	the law and order situation where you live
#	LocalityClean	the surroundings of your home are clean and pleasant	আপনার বাড়ীর আশে-পাশের এলাকা/পরিবেশের পরিচ্ছন্নতা এবং সৌন্দর্য	the place where you live is clean, and pretty
#	Leaders	the leaders or those who have influence/ power where you live (political, government ie union parishad members , honorific ie mureabbis, or jamindar families)	আপনার এলাকার নেতা ও প্রভাবশালী ব্যক্তি (ভালো থাকা/ হওয়া)	the leaders and powerful where you live
#	RoadsAndTransport	roads and transport , connecting you to adminsitrative centres , forms of transport available, costs , frequency of service	রাস্তা ও যানবাহনের ব্যবস্থ	roads and transport linkages
#		the governement services and help available to you (Feeding	সরকারী সেবা ও বিভিন্ন সুবিধা পাওয়া	govt services and

31	ServicesNGO	the NGO services available to you (credit groups, training)	এন্ জি ও সেবা গ্রহনের সুযোগ (যেমন: ট্রেনিং এর সুবিধা, লোনের সুবিধা)	ngo services and facilities
32	ServicesHealth	health care services available to you, proximity, quality, costs, range of services available	আপনার পরিবারের স্বাস্থ্য সেবা পাবার যা যা সুযোগ আছে	healthcare services
33	Educational Institutes/ schools	having adequarte schools, acess, costs , distance, standard	আপনার পরিবারের সদস্যদের যে সব শিক্ষা গ্রহণের সুযোগ আছে	educational services
34	Markets	distance, variety of goods & services available, costs	কেনা বেচার জন্য যে সব হাট-বাজার/মার্কেট রয়েছে	markets
			CHILDREN	
35	Children	having children, the number of children, gender, ages,	সন্তান থাকা	having children
36	ChildrenAchievements	the accomplishments of the children, could be in terms of schooling, work, sport , volunteering etc…	সন্তানের সাফল্য	children's schievements
37	ChildrenBehaviour	the bewhaviour of the children	সন্তানের আচরন-ব্যবহার	children's behaviour
38	ChildrenUpbringing	the upbringing you are giving your children (e.g for younger children this would mean education or moral education, for older chidlren the arrangement of marriages or seeing them settled)	আপনার সন্তানদের যেভাবে মানুষ করা	the way you are bring up children
	CONNECTEDNESS			
39	NeighbourhoodRelations	the relationship that your family has with the other people residing in this area	আপনার পরিবারের সাথে ঐ এলাকার লোকেদের সম্পর্ক	teh relationship the people of this area have with your family
40	FamilyReputation	the reputation of your family are you regarded as good people/	আপনার পরিবারের সুনাম	your familys good reputation
41	FamilyRespect	the respect your family commands, influence it asserts	আপনার পরিবার যে শ্রদ্ধা সম্মান পায়	your familys honour
42	CommunityFestivals	your household's particpation in the various cermeonies , functions in the village (area)	আপনার পরিবার (গ্রামের) বিভিন্ন উৎসবে জড়িত থাকা	your famil's involvement in the festivities of the area
43	CommunityOrganisations	CommunityOrganisations	আপনার পরিবার স্থানীয় সংগঠন জড়িত থাকা / অংশগ্রহন (যেমন: সমিতি, স্কুল/মাদ্রাসা কমিটি, ক্লাব) ইত্যাদিতে	your famil's particpation in local organisations

44	CommunityDecisions	participating in any decisions thatmay involve your community or area	আপনার এলাকার গুরুত্বপূর্ন সিদ্ধান্ত গ্রহনে আপনার পরিবারের ভূমিকা / অংশগ্রহন	particpation in important decision making of your area
45	CommunityAssistance	of need, could be in terms of assistance during a family wedding/ death, or in times of misfortune , monetary, material, physical ie labour assistance, or even emotional support	আপনাদের প্রয়োজনে এই এলাকাবাসীর কাছ থেকে যে ধরণের সাহায্য পাবেন	will get from the local people in times of need
46	AccessToInfluentials	being able to contact influentials if you needed	আপনাদের প্রয়োজনে প্রভাবশালী ব্যাক্তিদের সাথে আপনার পরিবারের যোগাযোগ	your connections to the influentials, powerful in need
47	CommunityDevelopment	your family's contribution to the improvement of your area/ village	এই এলাকা / গ্রামের উন্নয়নের কাজে আপনার পরিবারের অংশগ্রহন / অবদান	contribution to the improvement of your area/ locality
48	FamilyObligations	fulfilling family responsibilities, could be financially e.g. Siblings marriages, care of elderly,	পারিবারিক দায়-দায়িত্ব পালন করা	fulfilling family's responsibilities
49	AssistingOthers	helping others (outside of the family), advise, shelter, monetary/material	পরিবারের বাইরে কাউকে আপনি যেভাবে সাহায্য বা উপদেশ দিতে পারেন	helping or advising persons outside of the family
50	PersonalRespect	the respect that you as an indiviudal have	ব্যক্তিগত ভাবে আপনি যে সম্মান পান	how the respondent is respected
	RELATIONSHIPS			
51	FamilyRelations	the relationship between your family members	আপনার পরিবারের সদস্যদের পারস্পরিক সম্পর্ক	family relationship
52	InLawsSupportandHelp	the support from in-laws/ marital family (support or advise)	আপনার শশুরবাড়ীর আত্মীয়স্বজনের কাছ থেকে যে সহায়তা ও উপদেশ পান	advise and support from ezxtended marital family
53	RelationsHusband	the relationship with your husband, intimacy, physical, support, respect	স্বামীর সাথে আপনার সম্পর্ক	relationship with husband
54	InLawsRespect	being respected within the extended marital family	আপনার শশুরবাড়ী থেকে আপনি যে সম্মান পান	/honoured by extended marital family
55	ParticipationDecisions	being consulted, being kept informed	আপনার শশুরবাড়ীর গুরুত্বপূর্ন সিদ্ধান্ত গ্রহনে আপনার ভূমিকা/ অংশগ্রহন	role in decsions of extended marital family
56			সম্পর্কজনদের সাথে আপনার সম্পর্ক	
57	RelationsNatal	relationship with your natal family	বাবার বাড়ীর সাথে আপনার সম্পর্ক	relationship with fathers/own home/family
58	TrustworthyFriend	having a trustworthy fried, a confidante	পরিবারের বাইরে এমন কেউ আছে যিনি বিশ্বস্ত এবং যার কাছ থেকে আপনি	having someone you trust who advises and supports
			উপদেশ গ্রহন করতে পারেন	
59	Friendships	being able to spend time with others, forming friendships	বন্ধুত্ব তৈরীর সুযোগ এবং পরিবারের বাইরে সময় কাটানোর সুযোগ	forming friendships
60a	Marriages	marriages of your children, or other family members, marriage prospects, past marriages	নিজের বিয়ে	
60b			সম্পর্কজনদের বিয়ে	

	HUMAN RESOURCES			
61	Educationfamily	the educational attainment of family members, how much education/training the members have, can mean individual memebrs, children, of family as a whole	পরিবারের সদস্যদের শিক্ষাগত যোগ্যতা ।	family members educational achievements
62	FamilyWorkSkills	the skills that family members have , knowledge ,	আপনার পরিবারের সদস্যদের যে সকল কাজ করার দক্ষতা আছে	the skills that family members have
63	HealthFamilyMenbers	the health of family members, fitness ,	আপনার পরিবারের স্বাস্থ্য এবং সুস্থতা	familys health and fitness
64	HealthSelf	your own health and fitness	আপনার নিজের স্বাস্থ্য এবং সুস্থতা ।	own health
65	FamilyHardworking	all family members are hardworking, sincere,	আপনার পরিবারের সদস্যরা পরিশ্রমী	the family members are hardworking
66	EducationSelf	your own educational attainment	আপনার শিক্ষাগত যোগ্যতা	own education
	PSYCHOLOGICAL			
67	Character	own character, the type of person you are	নিজের ব্যক্তিত্ব (ভালো ব্যক্তি হওয়া)	your character, personality
68	Religion	Religious practice, being able tp pray, having time to pray, having religious knowledge	ধর্মপালন,	religious practice
69	KnowledgeAndSkills	developing your knowledge and skills	নতুন কিছু শেখা বা দক্ষতা বাড়ানোর মাধ্যমে নিজেকে গড়ে তোলা	learning new things, new skills
70	AccessInformation	being able to access useful information that can help you improve yoru life, e.g health information, re. Services,	জীবনকে সুন্দর/উন্নত করার জন্য নতুন নতুন তথ্য খবর জানতে পারার সুযোগ	
71	OccupationalSuccess	your own occupational success, achievements	আপনার নিজের পেশাগত অর্জন	own success in occupation
72	PhysicalAppearance	being able to maintain a pleasant appearance, physical beauty, or bring able to take care of oneself, having cosmetics	আপনার চেহারা বা সুন্দর হয়ে থাকা	maintaining appearance
73	BeingAtPeace	having peace of mind, being free from worries	মনে শান্তি থাকা ।	peace oif mind

F. TIMELINE OF PROJECT ACTIVITIES

Nov-11	Dec 2007-Jan 2008	Feb-08	Mar-08
Sylhete Met with FIVDB	**Dhaka** item writing , review, expert review, translation of rest of questionnaire met with Dhaka FIVDB to discuss project staff requirements and possible sites conducted 1 FGD in Uttara w. Touhid	**Sylhet** W1. Site visits and selection W2 .2FGDs W3. 6 cognitve debriefing interviews & 1 FGD 2, Wasima Apa	**Sylhet** review questionnaire for Sylhete and finalise W3-4. recruitment and teraining of interviewers and grounding
Apr-08	**May-08**	**Jun-08**	**Jun Wk2-August Wk3**
MAIN FIELDWORK in Sylhete			**MAIN FIELDWORK in Dhaka**
	Dhaka wk3-4 ., finalised selection of site, and recruited interviewers - conducted 1 FGDs and 6 cognitive debriefing interviews in	**Dhaka** Wk1-2 recruited interviewers, and conducted training , grounding	

G. PARTICIPANTS OF FGDS/ GROUPS EXERCISES FOR ITEM POOL EVALUATION

Group 1. Sylhet Village in Khadimnagar (session held in a school building)
The village is situated approximately 2 km from the main road and is accessed by a mud road ; amenities are poor within the village , the area is not served by the LGED (electric company). group consisted of 8 women aged between 22 and 43 years . The particpants were all known to oneanother, residing in the area, and were members of an adult literacy group, and credit groups run by the NGO (FIVDB).

Group 2. Sylhet Village in Chattak upazila of Sunamganj district-approx 30 km from Sylhet Town (session held in courtyard of one of the particpants)

The village is situated approximately close to the the main road connecting Sunamganj and Sylhet town and is accessed by a mud road. Amenities are poor within the village , the area is not served by the LGED (electric company). The group consisted of 8 women aged between 19 and 42 years of age, who were known to oneanother living in the village.

Group 3. Sylhet Town, Kazitula (session held in outbuilding in landlords compound)
Group consisted of 5 women aged between 30 and 42 years residing in part pucca dwellings rented from a private owner. The owner resides within in a large walled compound adjacent to the plot. Amenities were good, having access to electricity and running water. Two of the women worked as domestic maids for the landlord (one as a cook, the other as a cleaner).

Group 4. Dhaka Uttara (session held in home of one of the participants)
The group consisted of 5 women aged between 23 and 46 years of age. Three of the women worked as domestic workers in households in Uttara, another worked as a 'manager' overseeing the construction of a building, whilst the fifth did not work. All of the women were married with young children. The slum area in which they lived is located on the other side of an embankment, (beyond sector 14) on privately owned land and consists of mud and thatch dwellings. Ameneties are poor, the inhabitants rely on kerosene lamps and wood stoves for cooking. Crime is a problem in the area as it is

Group 5 . Dhaka Mohammedpur
The group consisted of 6 women residing in the slums of Mohamedpur in Dhaka. They were aged between 21 and 34 years of age. All of the women were working, 3 of them worked in local factories (garments and confectionary), two worked as domestic workers, the sixth is employed by the owner of the property thta she resides in to collect rent from other properties owned by the landlord. In addition she runs a small teastall located at the front of the property bordering the road.

H. PARTICIPANTS OF PRE-TESTING INTERVIEWS FOR ITEM AND SCALE EVALUATION

ID.	Name	Age	Educ.	Resident	Occupation	Marital status	Occupn. of husband.	Educ. of Husb.	Notes
Dhaka									
D1	Nasima	40	Class 3	Uttara	Domestic maid	Married.	Rickshaw puller.	Class 5	Four children aged between 7 and 19 years. Eldest daughter is married and lives nearby works as a domestic worker. 2 youngest children in school. Son (17yrs) works in a 'restaurant'.
D2	Shaju	34	Class 6	Uttara	Manager of housing, runs a tea stall	Married	Self-employed, owns 3 rickshaws and rents them out.	Class 6	**Better off**.3 children aged between 4 and 12, 2 elder ones attend school.
D3	Monira	28	None	Mohd'pur	Domestic maid	Sep'd	-	-	Husband abandoned her after 4 years of marriage, as she had failed to conceive. Now lives with a widowed 'Aunt'.
D4	Shefali	24	Class 5	Uttara	Garments factory worker	Married	Rickshaw puller	None	2 children aged 5 and 3. Husband's younger sister lives with them to look after her children.
D5	Hasina	43	None	Mohd'pur	Domestic maid	Married	Husband invalid after road accident	None	2 sons married live nearby, sons help financially.
D6	Beauty	29	Class 6	Mohd'pur	NGO employee	Married	Rickshaw puller	Class 8	None, one young child died previously.
Sylhet									
S1	Oziroon	40	None	Sylhet town	Domestic maid	Sep'd	-	-	Husband remarried. Has 1 daughter who is married in Birgaon.
S2	Jesmin	47	None	Sylhet town	Domestic maid	Married	Rickshaw puller	Class 5	1 daughter and 1 son in high school, 1 son works in hospital as 'bearer'.
S3	Nasima	36	Class 8	Chattak	Housewife	Married	works in Middle East	Class 10	**Better off**.3 children all attend school
S4	Laila'r Ma	42	Class 6	Golapganj	Housewife	Married	Manager (supervisor) at plastics factory.	Class 9	**Better off**. 2 elder sons working (one in pharmacy, other in mill), daughter attends school.
S5	Shimu	28	None	Golapganj	Domestic maid,	Married	works in an autorickshaw workshop	Class 5	2 young children under 8 years of age, elder attends school. Also cultivates vegetables on land adjacent to homestead,
S6	Syeda	44	None	Golapganj	Housewife,	Married	electrician	Class 5	**Better off**. 6 children, only one working running a small shop in bazaar, 3 others are apprentices . 2 youngest in school. Occasionally earns money from sewing quilts at home.

G17	Convenience goods	is this about owning expensive things, like a television ...	not necessary- not satisfied	no these are not hings that we can afford, these are for rich people-- we can hardly feed ourselves	those that are well off and can afford to buy these things
			necessary-satisfied satisfied	if you can afford yes, something are good....you can learn alot from the TV, and it becomes important whne you have children... If they see what others have they also want it ...we have a television and mobile... Before we had a TV my sons would go to another persons house to watch television, they did not want to come home. Even though bhabi says she does not mind.... it might have led to a problem .Now that we have our own it is easier to look after the	those that have plenty of money to afford these things
			necessary- satisfied	somethigns are important -- like the fan -- ii have young children without this they would not be able to sleep ...as you can see i have a fridge- we can have cold water... When guests come we can give them cold drinks like Tang ornbottle of Coke... And in summer i can keep my cooking in it so it does not get spoiled. Alzso because my husband is away I have to rely on my Bashoor (brother -in-law) to get my shopping .... this way I can keep meat in the freeze and not bother him so much.....	people like me with young children
G18	EducationalInstitutes	whether there are schhols nearby that children can attend, and whether the facilities are good, ie	necessary	to improve our situation we came here.... My husband and i work hard and want our children to go to school so that they do not have to live like us	
			more or less satisfied	my daughter is 11 , she attends the school here which is free, they also give free books. Because it is nearby she can go, even when i am at the factory.... I hope that she can continue	
			necessary more or less satisfied	the apa there is very good- she understands our situation and is well behaved with us ... even though we are poor she gives our children time and attention, so that they can understand, she even let my eldest daughter borrow a book from her	
G19	Educationfamily	whether we can reaed and write,...family would mean my husband and me, and more important now for my children ... When i think of education of the family it is for my children... Our time is gone...	necessary not satisfied	Nowadays without some education you cannot do anything . If my husband could have gone to school he could do much more, about my children ... They are still young i do not know .... My son doesn't understand , he doesn't like to study... Instead he spends time with the boys here - even to work in the garments if you have soem education you can become an operator	not satisfied
		how educated the family is-families that are educated behave well	v necessary more or less satisfied	my husband is BA pass he works in a medicine company- my father thought this was a good proposal -- but in this village is very different from my home -- the people are nto so developedI am SSC pass i got married before i coudl take teh hsc exam- i wantzed to take the exam but now my motehr in law says why there i sno need- but my husband says i can takle it privately when my son is a little older - because my husband is educated he has a good job and our situation is good - he does not work in an office but still it is good	

	Item	Comprehension	Rating	Retrieval of information	Whose is more likely to be satisfied?
D1	CookingFacilities	this means you are asking about how we cook whether we have gas or lakri (wood) stoves ...and also the number of stoves that there are in relation to the number of families	very important-	Of course this is important we have to cook for our husbands and children.If there are few stoves we have little time to cook, and cannot cook at our convenience..	those who liuve in teir own home and od no not have to use a common cooking area.
			not satisfied	.I work as a maid in 2 houses one in th emorning and one in the afternnoon and do dnot have much time when i come at midday , I have to wait o use a stove, so to save time i try to prepare my vegetables or whatever I am going to cook in the morning before i leave but when i come i still have to wait in line --somedays i don't get time to bathe because i am waiting outside the kitchen so that i can use the stove- i always have to think ahead and make sure that we have the vegetables or fish already	
		the condition of the kitchen , size and number of rooms	very important-	As a wife and mother this is our main responsibility -- to cook and prepare the meals....not having the food ready when your husband returns at night can make him angry, and lead to fights and arguments ...	those that live in their own individual house- or those that have good understanding with the peopel who they live with, my Aunt lives in a house with her daughter-in-laws they all consider the others difficulties
			not satisfied	cooking -this takes up all my time - after working even at home i cannot rest , because i have to pay attention to when there is a stove free... The other woemn here do not cooperate, we asked the women who do not work outside to do their cooking earlier when we are at work so that when we caome boak the stoves are available but they do not listen... they take theri time , sleep or watch TV, and bathe and at midday when we return they are occupying the	
			very important	in our last home we did not have gas stoves, in this place the owner has installed new gas stoves.... Even though the rent here is Tk700 more it is much better....cooking with gas takes less time and we do not have to buy lackri (wood)	those who live where there are few families sharing a kitchen, where the kitchen is large and has gas connection
			satisfied		
			very important	the kitchen is next to our room there is always noise and smoke in our room , and the smell from the rubbish	those that are well off and do not have to live here
			not satisfied		
G1	Accesstoinformation	is this information about health and nutrition, there are things that we learn from the television and the apa from the BRAC at the school	important	for some things , if we know how to treat some illness at home we do not have to go to a doctor, take orsaline for example, you can buy the packets at the pharmacy... on TV they even show you how to make it at home from sugar or gur and salt so that you do not have to buy the packets from the pharmacy	those who are educated
			satisfied		
		things that you need to know when you come to a new place	important	my begum sahib (employer) she tells me lots of things, for instance where to go when my chiold was ill, she told me to take her to the hospital in mohakhali -- and she gave my husband a job wiht her brother as a guard at his garments factory -- because she got to know	those who have people to help and guide them
			satisfiued		
		being able to hear news about things from people around you	imnportant	apa .. (a neighbour) when i first moved to this area, knew that i needed help, it was he who told me about a job at the confectionary factory where she worked, she even took me and told me what to tell trhe manager so that he woul give me the job.	those who know how to read and write and who are mixing with good people
			more or less satisfied		
			important	the shaishta apa from BRAC told me about the pill, so that i would not fall pregnant after my last child.... If you can leave some time before getting pregnant it means your healrthg isis nopt ruined, not only that we have to think about how many we are and how many we can feed -- but there are so many things that we do not know we are illiterate	
			more or less satisfied		

J. QUESTIONNAIRE

K. PARTICIPANTS OF FOCUS GROUP DISCUSSIONS/ GROUP EXERCISES FOR GOAL ITEM EVALUATION

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L. TABLES OF MEAN WEIGHTED AND INDIVIDUALISED SCORES

		Dhaka (urban)					Sylhet (rural)				
		n	Min	Max	Mean	s.d.	n	Min	Max	Mean	s.d.
1	WGAAccessInformation_1	394	0	9	2.32	2.20	399	0	12	4.18	3.93
2	WGAAccessToInfluentials_1	394	0	12	0.72	1.66	399	0	12	4.42	3.47
3	WGAAssistingOthers_1	394	0	12	2.21	2.24	399	0	12	4.45	3.57
4	WGABeingAtPeace_1	394	0	12	4.90	2.80	399	0	12	6.69	3.53
5	WGABusiness_1	394	0	12	0.81	2.21	399	0	12	3.27	3.97
6	WGACharacter_1	394	0	12	5.02	2.69	399	0	12	7.87	3.40
7	WGAChildren_1	394	0	12	6.01	4.16	399	0	12	8.69	3.72
8	WGAChildrenAchievements_1	285	0	12	5.66	2.79	316	0	12	7.48	3.09
9	WGAChildrenBehaviour_1	309	0	12	7.12	2.83	318	0	12	8.48	2.74
10	WGAChildrenUpbringing_1	280	0	12	4.96	2.80	371	0	12	5.81	3.69
11	WGAClothing_1	394	0	12	3.62	2.14	399	0	12	6.37	3.39
12	WGACommunityAssistance_1	394	0	12	2.25	2.30	399	0	12	4.97	3.59
13	WGACommunityDecisions_1	394	0	9	0.27	1.02	399	0	12	5.07	3.69
14	WGACommunityDevelopment_1	394	0	8	0.26	0.96	399	0	12	4.68	3.57
15	WGACommunityFestivals_1	394	0	8	1.75	1.46	399	0	12	5.39	3.67
16	WGACommunityOrganisations_1	394	0	8	0.34	1.12	399	0	12	3.88	3.88
17	WGAConvenienceGoods_1	394	0	12	1.48	2.30	399	0	12	2.73	3.08
18	WGACookingFacilities_1	394	0	12	3.52	2.50					
19	WGAEducationalInstitutes_1	394	0	12	4.10	2.32	399	0	12	6.00	3.74
20	WGAEducationfamily_1	394	0	12	2.96	3.20	399	0	12	4.33	3.42
21	WGAEducationSelf_1	394	0	12	1.71	2.58	399	0	12	2.99	3.23
22	WGAElectricity_1	394	0	12	3.69	2.24	399	0	12	5.28	3.82
23	WGAEquipment_1	394	0	12	0.54	1.79	399	0	12	1.34	2.47
24	WGAFamilyHardworking_1	394	0	12	4.57	2.44	399	0	12	6.55	3.62
25	WGAFamilyObligations_1	394	0	12	5.13	2.57	399	0	12	7.80	3.17
26	WGAFamilyRelations_1	394	0	12	5.84	3.22	399	0	12	8.78	2.97
27	WGAFamilyReputation_1	394	0	12	3.68	2.71	399	0	12	6.60	3.40
28	WGAFamilyRespect_1	394	0	12	3.51	2.92	399	0	12	6.62	3.55
29	WGAFamilyWorkSkills_1	394	0	12	5.30	2.69	399	0	12	5.70	3.71
30	WGAFood_1	394	0	12	3.83	2.18	399	0	12	6.68	3.32
31	WGAFoodProduction_1	394	0	12	0.97	1.83	399	0	12	3.41	3.74
32	WGAFriendships_1	394	0	12	2.44	2.29	399	0	12	3.47	3.57
33	WGAHealthFamilyMembers_1	394	0	12	4.45	2.27	399	0	12	5.90	3.29
34	WGAHealthSelf_1	394	0	12	4.20	2.53	399	0	12	5.43	3.30
35	WGAHouseholdGoods_1	394	0	12	2.95	2.51	399	0	12	5.34	3.56
36	WGAHouseOwnership_1	394	0	12	1.94	2.49	399	0	12	5.73	3.95
37	WGAHousing_1	394	0	12	3.80	2.46	399	0	12	6.17	3.77
38	WGAIncomeHousehold_1	394	0	12	3.96	2.57	399	0	12	5.09	3.43
39	WGAIncomePersonal_1	394	0	12	1.79	2.52	399	0	12	1.49	2.46
40	WGAInlawsDecisions_1	394	0	12	3.23	3.20	399	0	12	5.82	3.62
41	WGAInLawsRespect_1	394	0	12	3.88	3.09	397	0	12	7.07	3.56
42	WGAInLawsSupportHelp_1	394	0	12	3.57	3.20	399	0	12	6.24	3.74
43	WGAKnowledgeAndSkills_1	394	0	9	2.52	2.22	399	0	12	3.91	3.24
44	WGALandHoldings_1	394	0	12	2.34	2.72	399	0	12	4.79	3.62
45	WGALeaders_1	394	0	9	1.31	2.10	398	0	12	5.40	3.58
46	WGALivestock_1	394	0	12	0.28	1.36	399	0	12	2.05	3.16
47	WGALoans_1	394	0	12	1.90	2.42	399	0	12	2.89	2.91
48	WGALocalityClean_1	394	0	12	3.52	2.08	399	0	12	6.71	3.54
49	WGALocalitySafe_1	95	0	12	5.40	2.50	399	0	12	7.12	3.53
50	WGAMarkets_1	394	0	12	4.31	2.11	399	0	12	6.58	4.07
51	WGAMarriages_1	394	0	12	5.80	1.54	131	0	12	6.52	2.27
52	WGANeighbourhoodRelations_1	394	0	12	4.11	2.37	399	0	12	6.78	3.32
53	WGAOccupationalSuccess_1	394	0	12	1.64	2.52	399	0	12	1.65	2.80
54	WGAPersonalRespect_1	394	0	12	3.52	2.97	399	0	12	6.25	3.54
55	WGAPersonalWealth_1	394	0	9	0.85	1.70	399	0	12	1.64	2.74
56	WGAPhone_1	394	0	12	1.78	3.02	399	0	12	5.09	4.63
57	WGAPhysicalAppearance_1	393	0	12	3.83	2.51	399	0	12	4.93	3.36
58	WGARecreation_1	394	0	12	2.47	2.42	399	0	12	4.33	3.22
59	WGARelationsHusband_1	394	0	12	6.49	3.80	395	0	12	9.27	3.17
60	WGARelationsNatal_1	394	0	12	5.49	3.48	399	0	12	8.55	3.47
61	WGAReligion_1	394	0	12	3.46	3.00	399	0	12	8.56	3.39
62	WGARest_1	394	0	12	3.17	2.60	399	0	12	5.19	3.46
63	WGARoadsAndTransport_1	394	0	12	3.71	2.05	398	0	12	6.69	3.91
64	WGASafeWater_1	394	0	12	4.40	2.93	399	0	12	7.37	3.92
65	WGASalariedJob_1	394	0	12	1.73	3.02	399	0	12	2.04	3.12
66	WGASavingsHousehold_1	394	0	12	1.69	2.25	399	0	12	2.16	3.05
67	WGASavingsPersonal_1	393	0	12	1.21	2.06	399	0	12	1.05	2.38
68	WGASelfEmployment_1	394	0	12	2.68	3.18	399	0	12	2.83	3.60
69	WGAServicesGovt_1	394	0	9	1.59	2.33	399	0	12	3.29	3.70
70	WGAServicesHealth_1	394	0	12	3.75	2.38	399	0	12	4.48	3.57
71	WGAServicesNGO_1	394	0	9	1.85	2.39	399	0	12	2.59	3.20
72	WGAToilet_1	394	0	12	3.92	2.46	399	0	12	7.04	3.89
73	WGATrustworthyFriend_1	394	0	12	2.93	2.92	399	0	12	4.26	4.01
74	WGAVehicle_1	394	0	8	0.38	1.31	399	0	12	1.03	2.27

		Dhaka (urban)					Sylhet (rural)			
		n	Min	Max	Mean	s.d.	n	Min	Max	Mean	s.d.
1	R20AccessInformation	394	1	16	6.16	3.60	399	1	20	8.87	5.86
2	R20AccessToInfluentials	394	1	20	3.03	2.89	399	1	20	9.39	5.10
3	R20AssistingOthers	394	1	20	5.81	3.77	399	1	20	9.02	5.52
4	R20BeingAtPeace	394	2	20	10.34	3.91	399	2	20	12.81	4.80
5	R20Business	394	1	20	4.04	3.27	399	1	20	7.81	5.79
6	R20Character	394	1	20	10.13	3.82	399	2	20	14.34	4.77
7	R20Children	394	1	20	11.26	5.88	399	2	20	14.95	5.45
8	R20ChildrenAchievements	285	1	20	10.88	4.43	316	3	20	14.28	4.66
9	R20ChildrenBehaviour	309	1	20	12.73	4.27	318	4	20	15.36	4.36
10	R20ChildrenUpbringing	280	2	20	10.22	4.57	371	2	20	11.69	5.19
11	R20Clothing	394	1	20	8.28	3.14	399	2	20	12.31	4.75
12	R20CommunityAssistance	394	1	20	6.28	3.55	399	1	20	10.23	5.21
13	R20CommunityDecisions	394	1	16	2.21	1.87	399	1	20	10.14	5.50
14	R20CommunityDevelopment	394	1	15	1.98	1.92	399	1	20	9.68	5.31
15	R20CommunityFestivals	394	1	15	5.04	2.55	399	1	20	10.56	5.48
16	R20CommunityOrganisations	394	1	15	2.50	2.10	399	1	20	8.22	5.88
17	R20ConvenienceGoods	394	1	20	4.98	3.64	399	1	20	6.70	4.66
18	R20CookingFacilities	394	1	20	8.15	3.48					
19	R20EducationalInstitutes	394	1	20	9.19	3.32	399	2	20	11.80	5.22
20	R20Educationfamily	394	1	20	7.39	4.43	399	2	20	9.68	4.66
21	R20EducationSelf	394	1	20	5.46	3.58	399	1	20	7.40	4.64
22	R20Electricity	394	1	20	8.63	3.17	399	2	20	10.60	5.26
23	R20Equipment	394	1	20	3.47	2.82	399	1	20	4.69	3.71
24	R20FamilyHardworking	394	3	20	9.84	3.40	399	1	20	12.58	5.04
25	R20FamilyObligations	394	3	20	10.60	3.65	399	3	20	14.30	4.37
26	R20FamilyRelations	394	1	20	11.56	4.51	399	3	20	15.48	4.25
27	R20FamilyReputation	394	2	20	8.36	4.10	399	1	20	12.60	4.82
28	R20FamilyRespect	394	1	20	8.01	4.52	399	1	20	12.51	5.15
29	R20FamilyWorkSkills	394	2	20	9.59	3.55	399	1	20	10.65	5.30
30	R20Food	394	1	20	8.67	3.19	399	3	20	12.78	4.56
31	R20FoodProduction	394	1	20	4.06	2.97	399	1	20	7.99	5.42
32	R20Friendships	394	1	20	6.33	3.68	399	1	20	7.47	5.58
33	R20HealthFamilyMembers	394	3	20	9.71	3.21	399	1	20	11.70	4.56
34	R20HealthSelf	394	3	20	9.36	3.55	399	3	20	11.15	4.51
35	R20HouseholdGoods	394	1	20	7.32	3.75	399	2	20	10.78	5.08
36	R20HouseOwnership	394	2	20	6.21	3.51	399	1	20	11.42	5.46
37	R20Housing	394	3	20	8.73	3.49	399	3	20	12.07	5.13
38	R20IncomeHousehold	394	2	20	8.88	3.61	399	1	20	10.72	4.66
39	R20IncomePersonal	394	1	20	5.66	3.84	399	1	20	5.00	3.51
40	R20InLawsDecisions	394	1	20	7.52	4.92	399	1	20	11.33	5.29
41	R20InLawsRespect	394	1	20	8.66	4.59	397	1	20	13.14	5.13
42	R20InLawsSupportHelp	394	1	20	8.09	4.85	399	1	20	11.96	5.37
43	R20KnowledgeAndSkills	394	1	16	6.52	3.65	399	1	20	8.50	4.91
44	R20LandHoldings	394	2	20	6.56	3.77	399	2	20	10.17	4.94
45	R20Leaders	394	1	16	4.19	3.46	398	1	20	10.80	5.19
46	R20Livestock	394	1	20	2.76	2.24	399	1	20	5.90	4.61
47	R20Loans	394	1	20	5.01	3.53	399	1	20	5.66	4.36
48	R20LocalityClean	394	1	20	8.21	3.18	399	2	20	12.79	4.94
49	R20LocalitySafe	394	1	20	10.32	3.65	399	1	20	13.15	5.10
50	R20Markets	394	2	20	9.40	3.12	399	2	20	12.39	5.89
51	R20Marriages	95	3	20	10.02	4.01	131	1	20	13.67	5.31
52	R20NeighbourhoodRelations	394	1	20	8.97	3.53	399	2	20	12.81	4.75
53	R20OccupationalSuccess	394	1	20	5.40	3.79	399	1	20	5.09	4.41
54	R20PersonalRespect	394	1	20	8.08	4.43	399	1	20	11.87	5.32
55	R20PersonalWealth	394	1	20	4.33	2.77	399	1	20	5.47	4.56
56	R20Phone	394	1	20	5.66	4.86	399	1	20	10.47	7.21
57	R20PhysicalAppearance	394	1	20	8.72	4.37	399	1	20	10.26	6.00
58	R20Recreation	394	1	20	6.66	4.15	399	1	20	9.69	5.42
59	R20RelationsHusband	393	3	20	12.78	5.48	395	1	20	16.37	4.61
60	R20RelationsNatal	394	1	20	11.21	5.35	399	1	20	15.48	5.55
61	R20Religion	394	1	20	8.51	4.31	399	1	20	15.48	4.94
62	R20Rest	394	1	20	7.84	4.40	399	1	20	11.06	5.63
63	R20RoadsAndTransport	394	1	20	8.79	3.54	398	1	20	12.94	5.86
64	R20SafeWater	394	1	20	9.79	4.73	399	1	20	13.85	5.83
65	R20SalariedJob	394	1	20	5.52	4.96	399	1	20	5.86	5.28
66	R20SavingsHousehold	394	1	20	5.93	3.48	399	1	20	6.71	4.47
67	R20SavingsPersonal	394	1	20	5.11	3.20	399	1	20	4.75	3.88
68	R20SelfEmployment	394	1	20	6.81	5.36	399	1	20	7.23	5.91
69	R20ServicesGovt	394	1	16	5.74	3.39	399	1	20	8.15	5.46
70	R20ServicesHealth	393	1	20	8.78	3.52	399	1	20	9.91	5.15
71	R20ServicesNGO	394	1	20	6.06	3.58	399	1	20	6.80	5.32
72	R20Toilet	394	1	20	9.09	4.05	399	1	20	13.46	5.84
73	R20TrustworthyFriend	394	1	20	8.09	5.10	399	1	20	9.02	6.73
74	R20Vehicle	394	1	20	2.42	2.82	399	1	20	4.17	3.37

		Dhaka (urban)							
				Weighted Goal Satisfaction			Individualised Goal Satisfaction		
		Min	Max	n	Mean	s.d.	n	Mean	s.d.
1	R20AccessInformation	1	16	394	6.16	3.60	344	6.89	3.26
2	R20AccessToInfluentials	1	20	394	3.03	2.89	214	4.67	3.05
3	R20AssistingOthers	1	20	394	5.81	3.77	351	6.36	3.62
4	R20BeingAtPeace	2	20	394	10.34	3.91	394	10.34	3.91
5	R20Business	1	20	394	4.04	3.27	350	4.39	3.28
6	R20Character	1	20	394	10.13	3.82	381	10.34	3.71
7	R20Children	1	20	394	11.26	5.88	366	11.85	5.68
8	R20ChildrenAchievements	1	20	285	10.88	4.43	283	10.93	4.39
9	R20ChildrenBehaviour	1	20	309	12.73	4.27	303	12.89	4.14
10	R20ChildrenUpbringing	2	20	280	10.22	4.57	278	10.28	4.54
11	R20Clothing	1	20	394	8.28	3.14	386	8.38	3.08
12	R20CommunityAssistance	1	20	394	6.28	3.55	377	6.51	3.45
13	R20CommunityDecisions	1	16	394	2.21	1.87	237	2.97	2.08
14	R20CommunityDevelopment	1	15	394	1.98	1.92	141	3.70	2.37
15	R20CommunityFestivals	1	15	394	5.04	2.55	352	5.42	2.41
16	R20CommunityOrganisations	1	15	394	2.50	2.10	291	3.03	2.21
17	R20ConvenienceGoods	1	20	394	4.98	3.64	369	5.25	3.61
18	R20CookingFacilities	1	20	394	8.15	3.48	384	8.26	3.45
19	R20EducationalInstitutes	1	20	394	9.19	3.32	392	9.22	3.29
20	R20Educationfamily	1	20	394	7.39	4.43	384	7.49	4.43
21	R20EducationSelf	1	20	394	5.46	3.58	360	5.79	3.55
22	R20Electricity	1	20	394	8.63	3.17	392	8.67	3.14
23	R20Equipment	1	20	394	3.47	2.82	319	4.04	2.84
24	R20FamilyHardworking	3	20	394	9.84	3.40	391	9.88	3.38
25	R20FamilyObligations	3	20	394	10.60	3.65	393	10.62	3.64
26	R20FamilyRelations	1	20	394	11.56	4.51	391	11.63	4.46
27	R20FamilyReputation	2	20	394	8.36	4.10	393	8.37	4.10
28	R20FamilyRespect	1	20	394	8.01	4.52	390	8.06	4.51
29	R20FamilyWorkSkills	2	20	394	9.59	3.55	392	9.62	3.55
30	R20Food	1	20	394	8.67	3.19	389	8.74	3.14
31	R20FoodProduction	1	20	394	4.06	2.97	379	4.17	2.98
32	R20Friendships	1	20	394	6.33	3.68	353	6.90	3.45
33	R20HealthFamilyMembers	3	20	394	9.71	3.21	393	9.73	3.20
34	R20HealthSelf	3	20	394	9.36	3.55	393	9.37	3.55
35	R20HouseholdGoods	1	20	394	7.32	3.75	389	7.38	3.73
36	R20HouseOwnership	2	20	394	6.21	3.51	393	6.22	3.51
37	R20Housing	3	20	394	8.73	3.49	391	8.77	3.47
38	R20IncomeHousehold	2	20	394	8.88	3.61	383	9.05	3.52
39	R20IncomePersonal	1	20	394	5.66	3.84	368	5.99	3.77
40	R20InLawsDecisions	1	20	394	7.52	4.92	362	8.08	4.74
41	R20InLawsRespect	1	20	394	8.66	4.59	378	8.97	4.42
42	R20InLawsSupportHelp	1	20	394	8.09	4.85	366	8.61	4.63
43	R20KnowledgeAndSkills	1	16	394	6.52	3.65	345	7.29	3.23
44	R20LandHoldings	2	20	394	6.56	3.77	388	6.60	3.78
45	R20Leaders	1	16	394	4.19	3.46	278	5.43	3.40
46	R20Livestock	1	20	394	2.76	2.24	327	3.11	2.29
47	R20Loans	1	20	394	5.01	3.53	312	5.80	3.52
48	R20LocalityClean	1	20	394	8.21	3.18	387	8.32	3.10
49	R20LocalitySafe	1	20	394	10.32	3.65	364	10.85	3.23
50	R20Markets	2	20	394	9.40	3.12	389	9.47	3.07
51	R20Marriages	3	20	95	10.02	4.01	94	10.07	4.00
52	R20NeighbourhoodRelations	1	20	394	8.97	3.53	384	9.12	3.44
53	R20OccupationalSuccess	1	20	394	5.40	3.79	366	5.72	3.74
54	R20PersonalRespect	1	20	394	8.08	4.43	386	8.19	4.40
55	R20PersonalWealth	1	20	394	4.33	2.77	383	4.42	2.76
56	R20Phone	1	20	394	5.66	4.86	348	6.28	4.85
57	R20PhysicalAppearance	1	20	394	8.72	4.37	376	9.09	4.12
58	R20Recreation	1	20	394	6.66	4.15	383	6.82	4.09
59	R20RelationsHusband	3	20	393	12.78	5.48	393	12.78	5.48
60	R20RelationsNatal	1	20	394	11.21	5.35	384	11.48	5.16
61	R20Religion	1	20	394	8.51	4.31	393	8.53	4.30
62	R20Rest	1	20	394	7.84	4.40	382	8.05	4.30
63	R20RoadsAndTransport	1	20	394	8.79	3.54	393	8.81	3.52
64	R20SafeWater	1	20	394	9.79	4.73	383	10.04	4.56
65	R20SalariedJob	1	20	394	5.52	4.96	341	6.22	4.97
66	R20SavingsHousehold	1	20	394	5.93	3.48	392	5.95	3.47
67	R20SavingsPersonal	1	20	394	5.11	3.20	385	5.21	3.18
68	R20SelfEmployment	1	20	394	6.81	5.36	362	7.32	5.30
69	R20ServicesGovt	1	16	394	5.74	3.39	391	5.77	3.38
70	R20ServicesHealth	1	20	393	8.78	3.52	392	8.80	3.50
71	R20ServicesNGO	1	20	394	6.06	3.58	390	6.11	3.56
72	R20Toilet	1	20	394	9.09	4.05	383	9.32	3.86
73	R20TrustworthyFriend	1	20	394	8.09	5.10	382	8.31	5.02
74	R20Vehicle	1	20	394	2.42	2.82	163	4.41	3.53

M. CORRELATION MATRICES

	BANGLADESH UNWEIGHTED GOAL SATISFACTION - BUGS													1
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	SMEAN(AccessInformation)													
2	SMEAN(AccessToInfluentials)	0.39												
3	SMEAN(AssistingOthers)	0.44	0.49											
4	SMEAN(BeingAtPeace)	0.24	0.27	0.24										
5	SMEAN(Business)	0.23	0.34	0.27	0.27									
6	SMEAN(Character)	0.31	0.34	0.38	0.32	0.23								
7	SMEAN(Children)	0.01	0.17	0.18	0.16	0.17	0.22							
8	SMEAN(ChildrenAchievements)	0.24	0.28	0.33	0.31	0.19	0.32	0.27						
9	SMEAN(ChildrenBehaviour)	0.07	0.16	0.21	0.24	0.09	0.38	0.32	0.58					
10	SMEAN(ChildrenUpbringing)	0.27	0.20	0.33	0.20	0.13	0.27	0.16	0.51	0.41				
11	SMEAN(Clothing)	0.28	0.40	0.35	0.42	0.39	0.43	0.22	0.31	0.25	0.28			
12	SMEAN(CommunityAssistance)	0.33	0.57	0.44	0.25	0.23	0.26	0.16	0.31	0.19	0.19	0.30		
13	SMEAN(CommunityDecisions)	0.45	0.70	0.48	0.27	0.40	0.39	0.22	0.29	0.19	0.21	0.41	0.52	
14	SMEAN(CommunityDevelopment)	0.40	0.74	0.50	0.28	0.39	0.37	0.21	0.30	0.19	0.20	0.43	0.55	0.85
15	SMEAN(CommunityFestivals)	0.41	0.61	0.55	0.27	0.36	0.42	0.19	0.31	0.22	0.29	0.41	0.53	0.66
16	SMEAN(CommunityOrganisations)	0.46	0.65	0.51	0.22	0.32	0.34	0.17	0.29	0.22	0.26	0.41	0.52	0.77
17	SMEAN(ConvenienceGoods)	0.18	0.37	0.35	0.34	0.34	0.32	0.22	0.25	0.22	0.20	0.48	0.31	0.32
18	SMEAN(EducationalInstitutes)	0.39	0.33	0.37	0.18	0.22	0.25	0.09	0.22	0.13	0.27	0.30	0.31	0.34
19	SMEAN(Educationfamily)	0.26	0.26	0.27	0.17	0.21	0.35	0.21	0.33	0.28	0.38	0.37	0.20	0.27
20	SMEAN(EducationSelf)	0.29	0.27	0.19	0.27	0.24	0.30	0.12	0.13	0.18	0.15	0.34	0.20	0.27
21	SMEAN(Electricity)	0.11	0.23	0.19	0.24	0.22	0.20	0.14	0.12	0.07	0.01	0.45	0.22	0.22
22	SMEAN(Equipment)	0.15	0.22	0.15	0.20	0.18	0.09	0.16	0.14	0.08	0.08	0.19	0.22	0.21
23	SMEAN(FamilyHardworking)	0.23	0.26	0.30	0.30	0.21	0.43	0.14	0.27	0.32	0.26	0.35	0.25	0.29
24	SMEAN(FamilyObligations)	0.28	0.40	0.39	0.44	0.33	0.37	0.15	0.24	0.20	0.20	0.42	0.34	0.44
25	SMEAN(FamilyRelations)	0.28	0.35	0.40	0.38	0.22	0.41	0.29	0.40	0.34	0.31	0.33	0.34	0.40
26	SMEAN(FamilyReputation)	0.33	0.50	0.52	0.28	0.31	0.47	0.22	0.33	0.37	0.30	0.49	0.44	0.52
27	SMEAN(FamilyRespect)	0.33	0.50	0.56	0.29	0.31	0.50	0.23	0.33	0.36	0.29	0.49	0.43	0.53
28	SMEAN(FamilyWorkSkills)	0.29	0.18	0.24	0.20	0.13	0.34	0.09	0.25	0.28	0.29	0.33	0.19	0.24
29	SMEAN(Food)	0.25	0.36	0.31	0.41	0.34	0.36	0.23	0.30	0.26	0.29	0.84	0.29	0.39
30	SMEAN(FoodProduction)	0.25	0.42	0.32	0.25	0.23	0.20	0.18	0.14	0.08	0.09	0.33	0.28	0.37
31	SMEAN(Friendships)	0.42	0.30	0.47	0.26	0.13	0.28	0.07	0.27	0.17	0.25	0.22	0.38	0.38
32	SMEAN(HealthFamilyMembers)	0.27	0.19	0.24	0.29	0.21	0.32	0.10	0.24	0.22	0.23	0.33	0.21	0.28
33	SMEAN(HealthSelf)	0.17	0.16	0.19	0.32	0.22	0.25	0.07	0.17	0.18	0.15	0.28	0.21	0.21
34	SMEAN(HouseholdGoods)	0.29	0.42	0.37	0.39	0.38	0.37	0.31	0.29	0.22	0.20	0.63	0.36	0.44
35	SMEAN(HouseOwnership)	0.38	0.50	0.39	0.39	0.38	0.40	0.19	0.28	0.21	0.25	0.51	0.31	0.50
36	SMEAN(Housing)	0.29	0.34	0.32	0.33	0.32	0.29	0.23	0.29	0.15	0.24	0.57	0.28	0.34
37	SMEAN(IncomeHousehold)	0.25	0.21	0.20	0.44	0.40	0.32	0.08	0.23	0.20	0.25	0.53	0.16	0.19
38	SMEAN(IncomePersonal)	0.03	-0.02	0.05	0.02	0.00	0.07	0.05	0.03	0.11	0.14	0.11	0.0	0.0
39	SMEAN(InLawsDecisions)	0.32	0.40	0.38	0.39	0.28	0.30	0.20	0.34	0.24	0.25	0.30	0.38	0.44
40	SMEAN(InLawsRespect)	0.35	0.42	0.43	0.38	0.29	0.37	0.21	0.37	0.28	0.25	0.33	0.41	0.48
41	SMEAN(InLawsSupportHelp)	0.28	0.35	0.35	0.37	0.25	0.25	0.22	0.32	0.24	0.25	0.30	0.39	0.40
42	SMEAN(KnowledgeAndSkills)	0.60	0.30	0.41	0.24	0.20	0.29	0.0	0.16	0.04	0.19	0.27	0.27	0.40
43	SMEAN(LandHoldings)	0.23	0.37	0.29	0.39	0.34	0.33	0.17	0.23	0.20	0.22	0.50	0.26	0.35
44	SMEAN(Leaders)	0.38	0.68	0.48	0.26	0.34	0.38	0.23	0.36	0.20	0.23	0.42	0.48	0.64
45	SMEAN(Livestock)	0.20	0.36	0.27	0.25	0.30	0.20	0.14	0.15	0.08	0.09	0.33	0.32	0.40
46	SMEAN(Loans)	0.05	0.14	0.18	0.17	0.25	0.17	0.24	0.08	0.12	0.05	0.26	0.05	0.15
47	SMEAN(LocalityClean)	0.33	0.49	0.36	0.30	0.21	0.37	0.18	0.25	0.19	0.22	0.37	0.44	0.54
48	SMEAN(LocalitySafe)	0.16	0.23	0.17	0.12	0.13	0.25	0.11	0.09	0.21	0.10	0.21	0.23	0.24
49	SMEAN(Markets)	0.33	0.28	0.31	0.18	0.14	0.42	0.19	0.22	0.32	0.22	0.31	0.25	0.34
50	SMEAN(Marriages)	0.15	0.14	0.19	0.17	0.12	0.17	0.12	0.24	0.20	0.23	0.21	0.14	0.20
51	SMEAN(NeighbourhoodRelations)	0.34	0.44	0.41	0.29	0.30	0.39	0.28	0.34	0.32	0.27	0.40	0.45	0.46
52	SMEAN(OccupationalSuccess)	0.03	0.08	0.11	0.14	0.01	0.13	0.02	0.07	0.14	0.06	0.08	0.14	0.07
53	SMEAN(PersonalRespect)	0.32	0.43	0.60	0.26	0.27	0.51	0.21	0.30	0.33	0.24	0.44	0.37	0.49
54	SMEAN(PersonalWealth)	0.23	0.29	0.22	0.26	0.25	0.20	0.02	0.10	0.08	0.14	0.28	0.26	0.26
55	SMEAN(Phone)	0.26	0.42	0.30	0.35	0.37	0.36	0.20	0.19	0.17	0.17	0.50	0.26	0.45
56	SMEAN(PhysicalAppearance)	0.40	0.31	0.33	0.43	0.24	0.35	0.10	0.28	0.18	0.21	0.33	0.25	0.34
57	SMEAN(Recreation)	0.34	0.40	0.36	0.36	0.25	0.31	0.16	0.35	0.19	0.27	0.51	0.36	0.41
58	SMEAN(RelationsHusband)	0.29	0.32	0.35	0.42	0.21	0.39	0.22	0.39	0.32	0.28	0.32	0.30	0.34
59	SMEAN(RelationsNatal)	0.21	0.36	0.32	0.31	0.19	0.35	0.23	0.31	0.31	0.22	0.31	0.32	0.39
60	SMEAN(Religion)	0.26	0.54	0.37	0.33	0.28	0.54	0.18	0.29	0.32	0.23	0.41	0.35	0.56
61	SMEAN(Rest)	0.29	0.39	0.35	0.41	0.27	0.35	0.16	0.37	0.30	0.28	0.53	0.30	0.41
62	SMEAN(RoadsAndTransport)	0.32	0.38	0.33	0.21	0.17	0.29	0.18	0.21	0.12	0.12	0.26	0.34	0.40
63	SMEAN(SafeWater)	0.09	0.23	0.21	0.22	0.21	0.24	0.19	0.19	0.15	0.07	0.48	0.23	0.26
64	SMEAN(SalariedJob)	0.11	0.12	0.07	0.10	0.13	0.06	0.00	0.09	0.09	0.07	0.18	0.12	0.10
65	SMEAN(SavingsHousehold)	0.10	0.25	0.17	0.26	0.25	0.15	0.09	0.13	0.05	0.19	0.31	0.19	0.15
66	SMEAN(SavingsPersonal)	0.17	0.11	0.07	0.19	0.16	0.09	0.01	0.04	0.01	0.16	0.20	0.11	0.08
67	SMEAN(SelfEmployment)	0.19	0.07	0.06	0.24	0.24	0.19	0.12	0.05	0.14	0.14	0.24	0.05	0.15
68	SMEAN(ServicesGovt)	0.35	0.31	0.26	0.06	0.13	0.09	-0.05	0.15	0.06	0.17	0.16	0.29	0.36
69	SMEAN(ServicesHealth)	0.34	0.20	0.34	0.11	0.18	0.08	-0.02	0.20	0.05	0.22	0.27	0.26	0.22
70	SMEAN(ServicesNGO)	0.14	0.14	0.12	0.14	0.18	0.04	0.05	0.06	0.03	0.07	0.11	0.17	0.15
71	SMEAN(Toilet)	0.28	0.36	0.32	0.29	0.28	0.30	0.22	0.21	0.15	0.16	0.54	0.34	0.38
72	SMEAN(TrustworthyFriend)	0.35	0.25	0.44	0.20	0.13	0.29	0.09	0.19	0.10	0.21	0.25	0.29	0.35
73	SMEAN(Vehicle)	0.10	0.18	0.20	0.16	0.18	0.11	0.12	0.11	0.09	0.12	0.21	0.15	0.16

r. > | .07 | has p < .05 ; r. > | .10 | has p. <.01. (Two-tailed.) N=793

	BANGLADESH UNWEIGHTED GOAL SATISFACTION - BUGS																2
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1																	
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11																	
12																	
13																	
14																	
15	0.67																
16	0.74	0.69															
17	0.38	0.34	0.33														
18	0.36	0.36	0.42	0.26													
19	0.30	0.24	0.27	0.30	0.27												
20	0.29	0.29	0.29	0.25	0.26	0.42											
21	0.25	0.22	0.21	0.32	0.12	0.05	0.18										
22	0.25	0.21	0.19	0.25	0.10	0.09	0.12	0.17									
23	0.25	0.34	0.29	0.26	0.31	0.29	0.24	0.14	0.05								
24	0.45	0.42	0.37	0.36	0.24	0.24	0.24	0.22	0.20	0.31							
25	0.38	0.38	0.37	0.27	0.28	0.29	0.24	0.17	0.16	0.30	0.50						
26	0.51	0.60	0.52	0.42	0.30	0.36	0.32	0.28	0.18	0.38	0.39	0.42					
27	0.54	0.60	0.52	0.40	0.29	0.36	0.29	0.30	0.16	0.38	0.40	0.43	0.87				
28	0.20	0.24	0.28	0.23	0.28	0.47	0.14	0.03	0.06	0.56	0.21	0.21	0.33	0.33			
29	0.41	0.39	0.38	0.45	0.26	0.34	0.31	0.40	0.21	0.33	0.42	0.34	0.45	0.46	0.30		
30	0.42	0.31	0.32	0.40	0.17	0.17	0.21	0.20	0.40	0.21	0.26	0.17	0.31	0.32	0.11	0.32	
31	0.34	0.35	0.38	0.19	0.28	0.26	0.18	0.12	0.15	0.24	0.28	0.33	0.30	0.32	0.27	0.21	0.13
32	0.27	0.25	0.28	0.27	0.23	0.31	0.26	0.16	0.10	0.40	0.32	0.26	0.30	0.28	0.43	0.30	0.12
33	0.24	0.22	0.18	0.29	0.19	0.19	0.28	0.17	0.11	0.38	0.30	0.22	0.26	0.26	0.26	0.24	0.17
34	0.47	0.40	0.42	0.58	0.30	0.29	0.29	0.45	0.27	0.28	0.39	0.33	0.44	0.49	0.21	0.59	0.42
35	0.53	0.45	0.45	0.50	0.33	0.36	0.35	0.30	0.29	0.39	0.44	0.38	0.48	0.48	0.28	0.51	0.46
36	0.39	0.31	0.31	0.42	0.21	0.28	0.25	0.37	0.20	0.23	0.37	0.30	0.31	0.33	0.23	0.56	0.38
37	0.24	0.23	0.22	0.42	0.25	0.31	0.26	0.25	0.21	0.33	0.32	0.27	0.30	0.30	0.32	0.52	0.31
38	0.0	0.03	0.0	0.14	0.03	0.14	0.09	0.02	0.05	0.02	0.04	0.00	0.06	0.09	0.14	0.11	0.01
39	0.42	0.36	0.41	0.25	0.28	0.25	0.27	0.15	0.18	0.33	0.47	0.48	0.29	0.27	0.21	0.28	0.19
40	0.49	0.46	0.47	0.29	0.29	0.28	0.30	0.16	0.16	0.39	0.51	0.55	0.39	0.39	0.22	0.31	0.22
41	0.44	0.37	0.38	0.27	0.29	0.22	0.28	0.17	0.23	0.30	0.41	0.51	0.27	0.26	0.16	0.25	0.21
42	0.36	0.32	0.38	0.27	0.32	0.21	0.25	0.14	0.20	0.25	0.26	0.24	0.29	0.31	0.27	0.26	0.27
43	0.38	0.34	0.35	0.54	0.19	0.31	0.32	0.29	0.28	0.38	0.42	0.29	0.40	0.39	0.27	0.52	0.43
44	0.63	0.54	0.58	0.33	0.38	0.31	0.25	0.27	0.19	0.25	0.35	0.42	0.45	0.48	0.14	0.38	0.32
45	0.44	0.38	0.35	0.33	0.22	0.16	0.25	0.26	0.49	0.23	0.30	0.21	0.34	0.34	0.11	0.34	0.51
46	0.17	0.11	0.08	0.20	0.05	0.16	0.16	0.18	0.11	0.16	0.20	0.14	0.20	0.23	0.10	0.24	0.17
47	0.52	0.46	0.49	0.28	0.40	0.27	0.23	0.17	0.14	0.29	0.38	0.37	0.37	0.39	0.23	0.38	0.25
48	0.27	0.24	0.28	0.17	0.23	0.20	0.14	0.16	0.05	0.17	0.19	0.25	0.33	0.33	0.21	0.19	0.09
49	0.30	0.38	0.38	0.23	0.51	0.25	0.26	0.14	0.09	0.39	0.22	0.28	0.44	0.41	0.35	0.30	0.14
50	0.14	0.14	0.17	0.17	0.09	0.16	0.13	0.10	0.07	0.13	0.14	0.24	0.11	0.12	0.12	0.19	0.09
51	0.44	0.50	0.47	0.28	0.26	0.33	0.31	0.21	0.16	0.37	0.38	0.43	0.58	0.56	0.31	0.38	0.20
52	0.08	0.12	0.06	0.19	0.09	0.00	0.06	0.09	0.11	0.18	0.06	0.03	0.14	0.13	0.11	0.09	0.05
53	0.49	0.54	0.50	0.33	0.32	0.32	0.27	0.25	0.13	0.40	0.38	0.42	0.73	0.78	0.34	0.41	0.25
54	0.29	0.29	0.25	0.39	0.21	0.10	0.15	0.17	0.22	0.20	0.26	0.14	0.27	0.26	0.17	0.31	0.30
55	0.47	0.38	0.40	0.58	0.22	0.31	0.30	0.28	0.26	0.27	0.41	0.30	0.42	0.43	0.24	0.50	0.43
56	0.33	0.33	0.40	0.25	0.31	0.27	0.28	0.10	0.20	0.30	0.35	0.37	0.29	0.29	0.31	0.33	0.20
57	0.43	0.37	0.39	0.38	0.30	0.29	0.27	0.28	0.23	0.26	0.41	0.36	0.39	0.40	0.23	0.45	0.34
58	0.33	0.34	0.30	0.27	0.24	0.27	0.22	0.14	0.21	0.31	0.47	0.61	0.37	0.35	0.23	0.29	0.18
59	0.40	0.34	0.35	0.28	0.29	0.24	0.22	0.08	0.12	0.30	0.43	0.47	0.41	0.41	0.23	0.29	0.21
60	0.56	0.49	0.47	0.33	0.32	0.30	0.31	0.20	0.17	0.39	0.46	0.45	0.45	0.48	0.22	0.36	0.30
61	0.40	0.37	0.40	0.38	0.29	0.32	0.25	0.26	0.16	0.38	0.42	0.39	0.45	0.46	0.32	0.50	0.23
62	0.37	0.39	0.42	0.15	0.42	0.18	0.10	0.19	0.09	0.26	0.28	0.33	0.29	0.28	0.23	0.25	0.15
63	0.29	0.23	0.21	0.35	0.17	0.15	0.17	0.43	0.22	0.18	0.26	0.20	0.30	0.31	0.10	0.46	0.30
64	0.14	0.07	0.09	0.21	0.12	0.21	0.14	0.09	0.08	0.10	0.11	0.06	0.13	0.12	0.09	0.14	0.13
65	0.23	0.16	0.15	0.43	0.18	0.22	0.19	0.16	0.19	0.19	0.27	0.13	0.23	0.21	0.17	0.33	0.24
66	0.07	0.11	0.09	0.25	0.18	0.13	0.14	0.13	0.11	0.13	0.18	0.07	0.11	0.09	0.18	0.24	0.11
67	0.11	0.11	0.13	0.17	0.13	0.14	0.15	0.11	0.18	0.18	0.20	0.13	0.17	0.17	0.23	0.25	0.09
68	0.38	0.28	0.37	0.11	0.42	0.19	0.16	-0.01	0.12	0.21	0.18	0.13	0.10	0.08	0.15	0.18	0.14
69	0.27	0.25	0.29	0.21	0.56	0.20	0.16	0.10	0.11	0.22	0.16	0.18	0.21	0.23	0.20	0.25	0.20
70	0.20	0.12	0.17	0.13	0.19	0.05	0.01	0.08	0.04	0.09	0.10	0.06	-0.04	-0.04	0.04	0.09	0.04
71	0.39	0.35	0.34	0.42	0.23	0.22	0.25	0.52	0.23	0.19	0.35	0.25	0.36	0.38	0.14	0.52	0.37
72	0.30	0.31	0.34	0.16	0.24	0.23	0.14	0.05	0.09	0.23	0.26	0.26	0.31	0.33	0.27	0.21	0.16
73	0.21	0.18	0.16	0.28	0.13	0.12	0.16	0.12	0.33	0.17	0.11	0.05	0.17	0.15	0.09	0.22	0.29

	BANGLADESH UNWEIGHTED GOAL SATISFACTION - BUGS																3
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
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30																	
31																	
32	0.23																
33	0.12	0.48															
34	0.25	0.29	0.26														
35	0.33	0.31	0.24	0.49													
36	0.21	0.29	0.23	0.54	0.44												
37	0.14	0.32	0.28	0.44	0.43	0.41											
38	0.0	0.01	0.05	0.07	0.06	0.05	0.13										
39	0.35	0.30	0.25	0.28	0.38	0.30	0.21	-0.04									
40	0.36	0.28	0.23	0.34	0.44	0.30	0.23	-0.03	0.77								
41	0.25	0.26	0.24	0.32	0.38	0.27	0.19	-0.02	0.73	0.73							
42	0.36	0.19	0.19	0.23	0.36	0.23	0.24	0.08	0.27	0.31	0.23						
43	0.19	0.27	0.28	0.48	0.71	0.45	0.49	0.12	0.30	0.38	0.32	0.30					
44	0.33	0.20	0.18	0.46	0.44	0.38	0.20	-0.04	0.38	0.47	0.36	0.32	0.30				
45	0.20	0.15	0.19	0.34	0.45	0.32	0.26	0.05	0.21	0.27	0.25	0.28	0.39	0.32			
46	0.04	0.16	0.12	0.25	0.23	0.19	0.26	0.21	0.12	0.15	0.15	0.07	0.19	0.16	0.16		
47	0.29	0.24	0.14	0.37	0.42	0.40	0.24	-0.04	0.39	0.37	0.33	0.28	0.26	0.49	0.25	0.06	
48	0.11	0.22	0.14	0.18	0.23	0.18	0.16	-0.04	0.14	0.20	0.16	0.12	0.14	0.27	0.13	0.06	0.36
49	0.25	0.27	0.20	0.28	0.35	0.15	0.14	0.08	0.20	0.23	0.23	0.27	0.20	0.29	0.21	0.10	0.36
50	0.15	0.21	0.11	0.18	0.20	0.19	0.11	0.00	0.21	0.23	0.22	0.08	0.17	0.13	0.01	0.06	0.09
51	0.39	0.29	0.23	0.39	0.42	0.32	0.32	0.01	0.34	0.42	0.31	0.28	0.34	0.43	0.27	0.16	0.42
52	0.15	0.04	0.15	0.06	0.11	-0.01	0.05	0.43	0.03	0.03	0.04	0.19	0.13	0.08	0.10	0.00	0.06
53	0.31	0.32	0.26	0.41	0.44	0.30	0.27	0.09	0.27	0.38	0.23	0.30	0.35	0.40	0.29	0.21	0.32
54	0.21	0.12	0.16	0.32	0.37	0.23	0.26	0.20	0.15	0.17	0.17	0.30	0.38	0.18	0.39	0.09	0.21
55	0.17	0.28	0.23	0.52	0.48	0.39	0.42	0.01	0.29	0.32	0.27	0.24	0.45	0.37	0.35	0.24	0.35
56	0.38	0.31	0.20	0.31	0.36	0.28	0.33	0.01	0.39	0.36	0.32	0.37	0.28	0.32	0.22	0.12	0.43
57	0.36	0.31	0.29	0.52	0.44	0.41	0.37	-0.04	0.36	0.37	0.34	0.29	0.41	0.42	0.29	0.15	0.41
58	0.29	0.26	0.25	0.32	0.35	0.30	0.30	-0.07	0.48	0.56	0.47	0.25	0.31	0.40	0.23	0.14	0.34
59	0.28	0.24	0.20	0.27	0.41	0.21	0.26	-0.04	0.37	0.44	0.36	0.17	0.30	0.38	0.21	0.17	0.37
60	0.19	0.26	0.24	0.36	0.49	0.30	0.25	-0.01	0.39	0.47	0.38	0.26	0.38	0.52	0.30	0.15	0.48
61	0.37	0.31	0.26	0.49	0.42	0.37	0.37	-0.03	0.37	0.42	0.36	0.28	0.41	0.41	0.22	0.18	0.43
62	0.31	0.18	0.16	0.20	0.34	0.24	0.14	-0.01	0.33	0.34	0.30	0.23	0.21	0.40	0.20	0.01	0.50
63	0.14	0.15	0.20	0.45	0.36	0.45	0.27	0.02	0.15	0.17	0.16	0.11	0.36	0.24	0.33	0.18	0.20
64	0.04	0.13	0.10	0.19	0.14	0.16	0.31	0.04	0.11	0.10	0.08	0.09	0.19	0.10	0.10	0.16	0.07
65	0.15	0.23	0.18	0.31	0.38	0.33	0.42	0.13	0.19	0.18	0.18	0.15	0.45	0.20	0.20	0.21	0.16
66	0.16	0.13	0.05	0.19	0.23	0.18	0.27	0.25	0.09	0.08	0.08	0.19	0.28	0.08	0.13	0.14	0.10
67	0.03	0.20	0.18	0.20	0.22	0.21	0.31	0.08	0.09	0.08	0.10	0.10	0.23	0.03	0.17	0.14	0.14
68	0.25	0.12	0.13	0.13	0.27	0.14	0.19	-0.03	0.22	0.25	0.25	0.23	0.15	0.32	0.19	-0.01	0.33
69	0.27	0.15	0.13	0.27	0.23	0.24	0.25	0.03	0.18	0.22	0.21	0.27	0.18	0.25	0.17	0.06	0.32
70	0.11	0.11	0.13	0.13	0.11	0.14	0.13	-0.06	0.17	0.15	0.15	0.10	0.03	0.18	0.04	0.21	0.18
71	0.20	0.25	0.25	0.57	0.45	0.53	0.35	-0.04	0.24	0.24	0.22	0.22	0.40	0.36	0.36	0.23	0.35
72	0.56	0.17	0.13	0.23	0.27	0.21	0.19	0.05	0.28	0.30	0.21	0.27	0.16	0.28	0.17	0.18	0.31
73	0.11	0.06	0.09	0.21	0.23	0.18	0.19	0.09	0.13	0.15	0.16	0.21	0.24	0.18	0.32	0.12	0.14

	BANGLADESH UNWEIGHTED GOAL SATISFACTION - BUGS																4
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
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50	0.08	0.10															
51	0.42	0.36	0.14														
52	0.07	0.22	-0.01	0.04													
53	0.37	0.48	0.17	0.50	0.18												
54	0.07	0.22	0.10	0.20	0.24	0.28											
55	0.15	0.25	0.15	0.31	0.00	0.34	0.31										
56	0.15	0.30	0.15	0.31	0.07	0.25	0.18	0.32									
57	0.12	0.20	0.20	0.38	0.01	0.29	0.29	0.41	0.36								
58	0.17	0.21	0.18	0.37	0.01	0.33	0.14	0.29	0.38	0.37							
59	0.25	0.28	0.16	0.40	0.07	0.39	0.12	0.30	0.28	0.35	0.44						
60	0.24	0.33	0.17	0.37	0.07	0.42	0.19	0.38	0.35	0.36	0.42	0.43					
61	0.22	0.31	0.12	0.40	0.02	0.33	0.22	0.41	0.39	0.68	0.41	0.34	0.40				
62	0.27	0.40	0.09	0.32	0.07	0.30	0.19	0.19	0.30	0.29	0.27	0.26	0.32	0.30			
63	0.13	0.13	0.15	0.22	0.00	0.29	0.20	0.30	0.16	0.30	0.18	0.14	0.27	0.28	0.17		
64	0.03	0.02	0.00	0.13	0.05	0.10	0.00	0.20	0.06	0.11	0.07	0.08	0.06	0.14	0.02	0.02	
65	0.10	0.10	0.11	0.19	0.19	0.18	0.36	0.29	0.17	0.26	0.19	0.16	0.16	0.23	0.07	0.15	0.18
66	0.04	0.17	0.10	0.10	0.27	0.09	0.45	0.18	0.16	0.17	0.10	0.05	0.01	0.17	0.11	0.04	0.05
67	0.12	0.19	0.12	0.20	0.07	0.18	0.09	0.18	0.21	0.14	0.13	0.10	0.16	0.14	0.10	0.12	0.01
68	0.15	0.29	0.08	0.17	0.07	0.11	0.16	0.17	0.24	0.24	0.20	0.16	0.27	0.23	0.38	0.02	0.11
69	0.11	0.36	0.05	0.16	0.09	0.21	0.16	0.18	0.25	0.32	0.20	0.15	0.14	0.28	0.28	0.11	0.09
70	0.07	0.07	0.05	0.01	0.05	-0.02	0.07	0.09	0.14	0.15	0.13	0.02	0.14	0.13	0.19	0.04	0.07
71	0.19	0.20	0.15	0.33	0.01	0.33	0.24	0.43	0.21	0.43	0.22	0.24	0.31	0.37	0.20	0.61	0.12
72	0.16	0.20	0.19	0.33	0.07	0.34	0.17	0.23	0.32	0.23	0.25	0.26	0.21	0.25	0.25	0.10	0.06
73	0.06	0.17	0.09	0.15	0.19	0.15	0.27	0.20	0.13	0.17	0.11	0.12	0.15	0.17	0.05	0.15	0.06

	BANGLADESH UNWEIGHTED GOAL SATISFACTION - BUGS														5
	65	66	67	68	69	70	71	72							
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66	0.62														
67	0.19	0.12													
68	0.15	0.18	0.02												
69	0.23	0.17	0.09	0.51											
70	0.13	0.14	0.04	0.51	0.30										
71	0.23	0.09	0.17	0.09	0.20	0.11									
72	0.14	0.14	0.12	0.24	0.26	0.12	0.20								
73	0.25	0.25	0.05	0.15	0.15	0.03	0.19	0.10							

	BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN A												1
		1	2	3	4	5	6	7	8	9	10	11	12
1	NW20AccessInformation												
2	NW20AccessToInfluentials	0.48											
3	NW20AssistingOthers	0.51	0.55										
4	NW20BeingAtPeace	0.29	0.31	0.29									
5	NW20Business	0.26	0.37	0.28	0.32								
6	NW20Character	0.46	0.51	0.50	0.41	0.30							
7	NW20Children	0.07	0.22	0.18	0.20	0.21	0.26						
8	NW20ChildrenAchievements	0.32	0.37	0.41	0.40	0.23	0.51	0.43					
9	NW20ChildrenBehaviour	0.22	0.33	0.34	0.33	0.17	0.48	0.46	0.68				
10	NW20ChildrenUpbringing	0.32	0.31	0.38	0.25	0.18	0.36	0.21	0.60	0.46			
11	NW20Clothing	0.39	0.49	0.40	0.44	0.38	0.50	0.32	0.44	0.41	0.37		
12	NW20CommunityAssistance	0.46	0.61	0.50	0.32	0.27	0.45	0.22	0.44	0.39	0.27	0.43	
13	NW20CommunityDecisions	0.52	0.71	0.53	0.34	0.45	0.51	0.26	0.40	0.36	0.31	0.53	0.57
14	NW20CommunityDevelopment	0.47	0.76	0.54	0.33	0.42	0.49	0.24	0.38	0.33	0.27	0.52	0.60
15	NW20CommunityFestivals	0.53	0.65	0.59	0.34	0.42	0.50	0.24	0.38	0.35	0.33	0.55	0.57
16	NW20CommunityOrganisations	0.55	0.66	0.54	0.30	0.36	0.47	0.24	0.36	0.34	0.33	0.50	0.56
17	NW20ConvenienceGoods	0.27	0.35	0.38	0.34	0.31	0.37	0.23	0.34	0.30	0.31	0.42	0.36
19	NW20EducationalInstitutes	0.46	0.41	0.46	0.28	0.30	0.41	0.17	0.33	0.29	0.33	0.39	0.41
20	NW20Educationfamily	0.35	0.37	0.38	0.21	0.24	0.38	0.21	0.43	0.34	0.45	0.41	0.31
21	NW20EducationSelf	0.37	0.31	0.29	0.32	0.24	0.33	0.12	0.23	0.21	0.22	0.31	0.33
22	NW20Electricity	0.22	0.30	0.27	0.34	0.30	0.35	0.20	0.27	0.20	0.18	0.51	0.33
23	NW20Equipment	0.14	0.20	0.22	0.19	0.19	0.17	0.16	0.25	0.18	0.16	0.17	0.21
24	NW20FamilyHardworking	0.35	0.34	0.36	0.37	0.24	0.48	0.19	0.39	0.41	0.33	0.38	0.39
25	NW20FamilyObligations	0.32	0.46	0.41	0.45	0.34	0.47	0.23	0.34	0.35	0.25	0.45	0.46
26	NW20FamilyRelations	0.31	0.43	0.42	0.43	0.30	0.54	0.37	0.55	0.54	0.39	0.45	0.45
27	NW20FamilyReputation	0.44	0.59	0.56	0.35	0.32	0.55	0.21	0.45	0.46	0.39	0.53	0.54
28	NW20FamilyRespect	0.43	0.57	0.58	0.36	0.33	0.57	0.22	0.43	0.45	0.39	0.52	0.54
29	NW20FamilyWorkSkills	0.39	0.27	0.32	0.27	0.14	0.37	0.13	0.35	0.35	0.34	0.36	0.30
30	NW20Food	0.33	0.45	0.36	0.42	0.34	0.46	0.32	0.44	0.40	0.35	0.85	0.39
31	NW20FoodProduction	0.31	0.43	0.36	0.27	0.26	0.33	0.19	0.26	0.21	0.19	0.36	0.35
32	NW20Friendships	0.45	0.33	0.49	0.23	0.14	0.36	0.06	0.28	0.27	0.27	0.24	0.43
33	NW20HealthFamilyMembers	0.37	0.26	0.34	0.33	0.23	0.39	0.16	0.39	0.36	0.30	0.40	0.31
34	NW20HealthSelf	0.23	0.20	0.24	0.32	0.25	0.31	0.12	0.29	0.30	0.21	0.30	0.29
35	NW20HouseholdGoods	0.36	0.41	0.36	0.42	0.37	0.47	0.32	0.36	0.30	0.28	0.60	0.37
36	NW20HouseOwnership	0.40	0.52	0.41	0.45	0.40	0.49	0.22	0.36	0.32	0.31	0.56	0.39
37	NW20Housing	0.32	0.42	0.33	0.37	0.39	0.42	0.32	0.40	0.29	0.31	0.58	0.36
38	NW20IncomeHousehold	0.26	0.28	0.19	0.42	0.42	0.32	0.16	0.33	0.27	0.30	0.50	0.23
39	NW20IncomePersonal	0.05	0.01	0.10	0.02	-0.05	0.08	0.01	0.07	0.13	0.14	0.05	0.03
40	NW20InLawsDecisions	0.37	0.44	0.43	0.42	0.33	0.44	0.28	0.43	0.38	0.33	0.37	0.45
41	NW20InLawsRespect	0.44	0.48	0.46	0.44	0.34	0.55	0.26	0.47	0.43	0.33	0.43	0.50
42	NW20InLawsSupportHelp	0.37	0.40	0.42	0.43	0.29	0.42	0.28	0.45	0.39	0.34	0.39	0.45
43	NW20KnowledgeAndSkills	0.62	0.38	0.47	0.31	0.20	0.43	0.02	0.24	0.15	0.22	0.33	0.37
44	NW20LandHoldings	0.22	0.34	0.26	0.42	0.34	0.37	0.20	0.31	0.27	0.25	0.51	0.26
45	NW20Leaders	0.45	0.71	0.53	0.33	0.36	0.55	0.29	0.45	0.37	0.35	0.53	0.57
46	NW20Livestock	0.26	0.40	0.33	0.30	0.33	0.30	0.20	0.25	0.19	0.19	0.36	0.36
47	NW20Loans	0.06	0.06	0.14	0.06	0.16	0.03	0.10	0.02	0.07	0.01	0.11	0.08
48	NW20LocalityClean	0.44	0.56	0.44	0.37	0.33	0.53	0.29	0.39	0.38	0.34	0.50	0.51
49	NW20LocalitySafe	0.39	0.40	0.36	0.26	0.26	0.41	0.18	0.27	0.29	0.21	0.41	0.45
50	NW20Markets	0.48	0.43	0.45	0.30	0.21	0.47	0.25	0.39	0.39	0.32	0.42	0.44
51	NW20Marriages	0.41	0.36	0.36	0.44	0.31	0.42	0.35	0.53	0.46	0.48	0.47	0.35
52	NW20NeighbourhoodRelations	0.48	0.57	0.51	0.36	0.30	0.48	0.29	0.45	0.43	0.35	0.50	0.60
53	NW20OccupationalSuccess	0.10	0.06	0.16	0.15	-0.01	0.15	0.05	0.16	0.20	0.09	0.12	0.16
54	NW20PersonalRespect	0.44	0.52	0.63	0.36	0.28	0.53	0.20	0.42	0.44	0.36	0.49	0.51
55	NW20PersonalWealth	0.25	0.25	0.25	0.25	0.22	0.19	0.02	0.12	0.11	0.16	0.22	0.25
56	NW20Phone	0.36	0.46	0.37	0.35	0.31	0.37	0.17	0.28	0.24	0.29	0.49	0.31
57	NW20PhysicalAppearance	0.48	0.37	0.43	0.32	0.21	0.43	0.07	0.30	0.30	0.28	0.33	0.42
58	NW20Recreation	0.45	0.39	0.43	0.33	0.23	0.44	0.21	0.43	0.35	0.36	0.52	0.43
59	NW20RelationsHusband	0.31	0.37	0.36	0.43	0.27	0.47	0.33	0.52	0.50	0.35	0.43	0.39
60	NW20RelationsNatal	0.31	0.42	0.42	0.36	0.21	0.45	0.30	0.44	0.47	0.28	0.39	0.46
61	NW20Religion	0.35	0.55	0.42	0.38	0.32	0.61	0.25	0.44	0.47	0.30	0.48	0.45
62	NW20Rest	0.38	0.41	0.39	0.31	0.28	0.42	0.26	0.40	0.41	0.39	0.51	0.38
63	NW20RoadsAndTransport	0.41	0.50	0.48	0.34	0.28	0.51	0.29	0.35	0.30	0.29	0.48	0.48
64	NW20SafeWater	0.25	0.38	0.30	0.35	0.29	0.40	0.28	0.36	0.30	0.19	0.54	0.38
65	NW20SalariedJob	0.09	0.05	0.07	0.09	0.09	0.06	0.08	0.14	0.17	0.11	0.13	0.10
66	NW20SavingsHousehold	0.15	0.22	0.20	0.26	0.22	0.19	0.13	0.21	0.15	0.24	0.29	0.23
67	NW20SavingsPersonal	0.16	0.08	0.11	0.17	0.07	0.09	-0.02	0.09	0.05	0.18	0.13	0.14
68	NW20SelfEmployment	0.16	0.12	0.09	0.28	0.28	0.15	0.10	0.13	0.17	0.19	0.26	0.11
69	NW20ServicesGovt	0.40	0.35	0.31	0.10	0.18	0.22	0.01	0.20	0.17	0.22	0.26	0.34
70	NW20ServicesHealth	0.41	0.28	0.37	0.16	0.21	0.27	0.09	0.27	0.19	0.26	0.34	0.34
71	NW20ServicesNGO	0.26	0.19	0.19	0.07	0.18	0.13	0.02	0.14	0.15	0.17	0.18	0.27
72	NW20Toilet	0.37	0.45	0.38	0.35	0.34	0.46	0.29	0.39	0.32	0.28	0.58	0.44
73	NW20TrustworthyFriend	0.35	0.25	0.45	0.16	0.17	0.31	0.10	0.23	0.25	0.21	0.25	0.31
74	NW20Vehicle	0.20	0.27	0.33	0.22	0.23	0.21	0.17	0.21	0.16	0.24	0.27	0.27
	r. > | .07 | has p < .05 ; r. > | .10 | has p. <.01. (Two-tailed.) N=793												

	BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN A																2
	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
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13																	
14	0.85																
15	0.73	0.71															
16	0.80	0.75	0.75														
17	0.35	0.36	0.37	0.38													
19	0.46	0.43	0.46	0.48	0.36												
20	0.37	0.37	0.31	0.35	0.38	0.36											
21	0.33	0.35	0.34	0.35	0.29	0.35	0.45										
22	0.33	0.32	0.36	0.32	0.34	0.29	0.19	0.22									
23	0.21	0.23	0.21	0.19	0.25	0.17	0.14	0.17	0.17								
24	0.40	0.34	0.43	0.41	0.35	0.41	0.33	0.27	0.25	0.09							
25	0.52	0.52	0.47	0.43	0.36	0.34	0.27	0.28	0.31	0.21	0.41						
26	0.46	0.46	0.42	0.41	0.36	0.37	0.34	0.31	0.30	0.22	0.41	0.59					
27	0.61	0.60	0.61	0.58	0.41	0.38	0.42	0.30	0.33	0.16	0.45	0.48	0.50				
28	0.63	0.60	0.63	0.60	0.41	0.40	0.40	0.28	0.34	0.15	0.45	0.49	0.50	0.88			
29	0.33	0.27	0.33	0.36	0.25	0.34	0.43	0.15	0.21	0.12	0.58	0.27	0.27	0.40	0.39		
30	0.50	0.49	0.51	0.48	0.42	0.37	0.39	0.30	0.46	0.16	0.39	0.47	0.44	0.51	0.49	0.34	
31	0.43	0.44	0.42	0.40	0.41	0.29	0.27	0.25	0.23	0.36	0.33	0.28	0.26	0.38	0.40	0.17	0.35
32	0.38	0.34	0.38	0.40	0.19	0.32	0.29	0.27	0.20	0.16	0.28	0.27	0.30	0.35	0.37	0.30	0.17
33	0.39	0.33	0.38	0.37	0.31	0.32	0.35	0.27	0.26	0.13	0.44	0.36	0.35	0.40	0.39	0.46	0.37
34	0.27	0.29	0.27	0.25	0.31	0.26	0.23	0.29	0.22	0.08	0.43	0.33	0.32	0.35	0.34	0.30	0.27
35	0.48	0.46	0.45	0.44	0.52	0.39	0.37	0.30	0.42	0.24	0.37	0.40	0.41	0.43	0.47	0.28	0.58
36	0.53	0.52	0.50	0.49	0.49	0.39	0.37	0.36	0.39	0.26	0.44	0.45	0.44	0.49	0.48	0.30	0.55
37	0.45	0.44	0.40	0.42	0.43	0.31	0.35	0.28	0.44	0.22	0.31	0.42	0.42	0.38	0.41	0.26	0.58
38	0.30	0.28	0.30	0.30	0.44	0.28	0.34	0.25	0.32	0.19	0.33	0.32	0.31	0.29	0.30	0.29	0.49
39	-0.03	-0.05	0.04	0.02	0.15	0.07	0.09	0.07	0.01	0.09	0.05	0.02	0.04	0.06	0.09	0.14	0.06
40	0.49	0.47	0.44	0.46	0.28	0.38	0.32	0.36	0.25	0.21	0.39	0.49	0.52	0.39	0.37	0.29	0.34
41	0.54	0.54	0.52	0.52	0.33	0.41	0.37	0.38	0.28	0.20	0.47	0.56	0.59	0.50	0.49	0.31	0.42
42	0.45	0.48	0.42	0.41	0.32	0.38	0.32	0.37	0.26	0.27	0.39	0.48	0.55	0.36	0.34	0.27	0.35
43	0.42	0.39	0.41	0.42	0.31	0.39	0.26	0.30	0.25	0.19	0.31	0.30	0.27	0.35	0.36	0.30	0.27
44	0.38	0.38	0.40	0.38	0.44	0.22	0.28	0.29	0.37	0.23	0.40	0.40	0.35	0.38	0.37	0.27	0.52
45	0.67	0.68	0.60	0.63	0.37	0.50	0.41	0.33	0.38	0.21	0.40	0.47	0.54	0.55	0.56	0.28	0.49
46	0.49	0.49	0.41	0.43	0.37	0.31	0.23	0.28	0.30	0.39	0.29	0.36	0.32	0.39	0.40	0.17	0.38
47	0.11	0.09	0.13	0.10	0.05	0.07	0.06	0.10	0.09	0.08	0.12	0.07	0.02	0.07	0.08	0.08	0.08
48	0.62	0.58	0.57	0.56	0.34	0.49	0.39	0.33	0.31	0.16	0.45	0.48	0.52	0.47	0.50	0.33	0.50
49	0.43	0.44	0.44	0.43	0.26	0.44	0.26	0.20	0.33	0.15	0.35	0.35	0.39	0.43	0.43	0.34	0.35
50	0.49	0.43	0.50	0.51	0.31	0.62	0.30	0.29	0.30	0.13	0.46	0.34	0.38	0.48	0.49	0.44	0.41
51	0.45	0.36	0.37	0.36	0.34	0.24	0.33	0.36	0.25	0.26	0.31	0.38	0.51	0.39	0.35	0.24	0.40
52	0.59	0.58	0.62	0.57	0.31	0.39	0.37	0.32	0.30	0.18	0.44	0.46	0.50	0.64	0.62	0.38	0.45
53	0.07	0.08	0.12	0.08	0.19	0.14	0.03	0.11	0.18	0.10	0.21	0.08	0.07	0.14	0.14	0.15	0.12
54	0.59	0.57	0.58	0.57	0.35	0.43	0.39	0.30	0.31	0.17	0.46	0.46	0.46	0.76	0.77	0.41	0.47
55	0.25	0.27	0.29	0.28	0.32	0.24	0.11	0.19	0.20	0.14	0.20	0.20	0.13	0.26	0.25	0.17	0.24
56	0.46	0.46	0.42	0.45	0.56	0.34	0.35	0.36	0.34	0.24	0.29	0.37	0.32	0.39	0.42	0.27	0.45
57	0.42	0.40	0.40	0.46	0.33	0.41	0.36	0.36	0.18	0.11	0.34	0.34	0.37	0.35	0.37	0.36	0.30
58	0.48	0.45	0.43	0.45	0.36	0.36	0.37	0.32	0.30	0.17	0.35	0.40	0.43	0.43	0.45	0.32	0.44
59	0.40	0.39	0.36	0.33	0.34	0.34	0.33	0.32	0.29	0.22	0.39	0.48	0.66	0.43	0.42	0.27	0.40
60	0.43	0.44	0.39	0.38	0.30	0.36	0.30	0.28	0.26	0.19	0.38	0.48	0.56	0.43	0.44	0.31	0.38
61	0.57	0.56	0.50	0.50	0.29	0.43	0.34	0.34	0.31	0.20	0.46	0.53	0.56	0.48	0.48	0.29	0.46
62	0.48	0.42	0.41	0.44	0.31	0.35	0.37	0.28	0.31	0.12	0.37	0.41	0.46	0.42	0.43	0.35	0.44
63	0.56	0.51	0.52	0.54	0.31	0.53	0.32	0.27	0.33	0.14	0.42	0.45	0.49	0.45	0.47	0.39	0.41
64	0.36	0.37	0.38	0.33	0.34	0.31	0.24	0.22	0.49	0.15	0.26	0.38	0.41	0.36	0.37	0.19	0.52
65	0.07	0.07	0.06	0.06	0.18	0.10	0.20	0.15	0.12	0.01	0.12	0.07	0.07	0.05	0.04	0.02	0.11
66	0.18	0.22	0.21	0.18	0.40	0.21	0.25	0.24	0.24	0.14	0.20	0.28	0.20	0.28	0.28	0.17	0.31
67	0.06	0.06	0.12	0.11	0.18	0.19	0.11	0.20	0.16	0.06	0.14	0.15	0.07	0.15	0.13	0.19	0.19
68	0.20	0.14	0.17	0.19	0.21	0.14	0.13	0.07	0.17	0.17	0.20	0.19	0.14	0.21	0.21	0.22	0.25
69	0.40	0.37	0.34	0.41	0.15	0.45	0.26	0.22	0.09	0.14	0.27	0.21	0.21	0.25	0.26	0.25	0.24
70	0.33	0.33	0.35	0.38	0.29	0.57	0.26	0.23	0.23	0.11	0.30	0.22	0.27	0.31	0.34	0.28	0.31
71	0.22	0.20	0.24	0.28	0.15	0.31	0.09	0.08	0.18	0.06	0.21	0.11	0.11	0.11	0.12	0.19	0.12
72	0.45	0.47	0.45	0.43	0.41	0.43	0.31	0.32	0.55	0.22	0.33	0.39	0.41	0.42	0.40	0.25	0.55
73	0.31	0.25	0.32	0.34	0.19	0.31	0.23	0.19	0.16	0.09	0.26	0.21	0.22	0.31	0.35	0.27	0.20
74	0.29	0.32	0.32	0.28	0.34	0.27	0.20	0.22	0.19	0.26	0.23	0.21	0.18	0.30	0.28	0.17	0.27

	BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN A																3
	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
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31																	
32	0.13																
33	0.20	0.25															
34	0.25	0.11	0.53														
35	0.44	0.22	0.32	0.26													
36	0.47	0.25	0.34	0.29	0.50												
37	0.42	0.21	0.33	0.27	0.54	0.51											
38	0.36	0.09	0.33	0.29	0.44	0.46	0.47										
39	0.01	0.06	0.05	0.04	0.05	0.04	0.00	0.03									
40	0.22	0.35	0.35	0.29	0.32	0.38	0.35	0.26	-0.01								
41	0.29	0.37	0.37	0.30	0.40	0.46	0.40	0.30	-0.02	0.79							
42	0.27	0.28	0.37	0.31	0.38	0.43	0.36	0.25	0.01	0.74	0.74						
43	0.28	0.37	0.25	0.22	0.31	0.36	0.25	0.22	0.17	0.33	0.36	0.33					
44	0.43	0.11	0.30	0.32	0.46	0.69	0.48	0.47	0.04	0.30	0.38	0.36	0.27				
45	0.36	0.36	0.30	0.25	0.44	0.48	0.46	0.29	-0.03	0.46	0.53	0.41	0.38	0.34			
46	0.51	0.18	0.20	0.20	0.37	0.46	0.40	0.28	0.06	0.22	0.31	0.28	0.29	0.38	0.43		
47	0.06	0.09	0.09	0.05	0.08	0.09	0.10	0.10	0.16	0.11	0.09	0.11	0.07	0.05	0.06	0.13	
48	0.33	0.31	0.34	0.23	0.44	0.50	0.47	0.34	-0.05	0.46	0.51	0.43	0.34	0.31	0.62	0.34	0.06
49	0.24	0.28	0.32	0.21	0.32	0.36	0.36	0.24	-0.01	0.36	0.41	0.34	0.29	0.21	0.48	0.26	0.14
50	0.27	0.33	0.37	0.23	0.36	0.42	0.28	0.19	0.14	0.33	0.37	0.36	0.36	0.24	0.47	0.30	0.08
51	0.26	0.27	0.40	0.22	0.42	0.47	0.45	0.28	0.05	0.42	0.45	0.48	0.25	0.41	0.40	0.19	0.07
52	0.30	0.42	0.36	0.27	0.38	0.44	0.38	0.29	0.03	0.47	0.52	0.42	0.38	0.30	0.58	0.36	0.09
53	0.03	0.16	0.08	0.18	0.04	0.10	0.00	0.02	0.51	0.10	0.06	0.10	0.29	0.10	0.15	0.06	0.07
54	0.34	0.41	0.40	0.31	0.41	0.47	0.35	0.25	0.13	0.36	0.47	0.35	0.36	0.34	0.51	0.39	0.13
55	0.26	0.15	0.12	0.14	0.25	0.34	0.22	0.22	0.22	0.16	0.18	0.17	0.33	0.32	0.18	0.32	0.08
56	0.42	0.21	0.28	0.22	0.46	0.51	0.40	0.40	0.02	0.28	0.34	0.32	0.29	0.41	0.42	0.39	0.04
57	0.19	0.44	0.31	0.25	0.33	0.33	0.27	0.26	0.07	0.42	0.43	0.38	0.43	0.19	0.37	0.23	0.02
58	0.34	0.43	0.39	0.27	0.48	0.36	0.42	0.34	-0.02	0.40	0.41	0.40	0.34	0.32	0.43	0.31	0.04
59	0.24	0.27	0.37	0.33	0.42	0.39	0.41	0.34	0.00	0.51	0.57	0.53	0.29	0.36	0.44	0.28	0.03
60	0.23	0.38	0.33	0.27	0.33	0.37	0.33	0.24	0.02	0.46	0.49	0.46	0.24	0.26	0.45	0.29	0.07
61	0.30	0.25	0.32	0.32	0.39	0.50	0.40	0.27	0.01	0.48	0.54	0.49	0.33	0.38	0.60	0.34	0.06
62	0.22	0.37	0.32	0.22	0.46	0.34	0.38	0.32	0.03	0.40	0.41	0.37	0.30	0.26	0.45	0.27	0.05
63	0.25	0.36	0.30	0.21	0.37	0.42	0.40	0.27	0.05	0.43	0.47	0.43	0.37	0.30	0.55	0.32	0.07
64	0.28	0.12	0.27	0.24	0.46	0.42	0.52	0.36	-0.02	0.30	0.34	0.33	0.24	0.37	0.42	0.31	0.00
65	0.08	0.05	0.12	0.10	0.16	0.03	0.15	0.24	-0.01	0.11	0.11	0.10	0.07	0.10	0.07	0.04	0.10
66	0.29	0.14	0.24	0.21	0.30	0.38	0.35	0.38	0.11	0.19	0.19	0.19	0.20	0.44	0.23	0.20	0.09
67	0.08	0.16	0.09	0.03	0.10	0.20	0.11	0.16	0.25	0.05	0.05	0.06	0.24	0.23	0.08	0.12	0.10
68	0.10	0.05	0.19	0.17	0.24	0.21	0.28	0.31	0.09	0.12	0.12	0.11	0.08	0.18	0.11	0.16	0.16
69	0.18	0.28	0.17	0.15	0.18	0.30	0.19	0.19	-0.02	0.23	0.28	0.28	0.28	0.16	0.39	0.21	0.05
70	0.23	0.29	0.23	0.18	0.33	0.27	0.28	0.24	-0.01	0.23	0.31	0.27	0.28	0.15	0.36	0.21	0.03
71	0.04	0.20	0.17	0.10	0.10	0.12	0.14	0.13	0.03	0.18	0.18	0.15	0.19	0.02	0.24	0.13	0.25
72	0.38	0.25	0.33	0.31	0.52	0.50	0.54	0.37	-0.05	0.36	0.38	0.38	0.33	0.37	0.48	0.36	0.11
73	0.14	0.54	0.21	0.12	0.23	0.19	0.24	0.18	0.10	0.23	0.27	0.21	0.24	0.11	0.28	0.14	0.22
74	0.29	0.14	0.12	0.14	0.28	0.29	0.22	0.21	0.12	0.23	0.25	0.25	0.29	0.26	0.31	0.29	0.11

	BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN A																4
	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
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49	0.54																
50	0.49	0.45															
51	0.31	0.36	0.36														
52	0.56	0.51	0.47	0.44													
53	0.11	0.16	0.28	0.01	0.10												
54	0.45	0.46	0.57	0.39	0.58	0.19											
55	0.21	0.15	0.27	0.22	0.18	0.24	0.29										
56	0.37	0.27	0.35	0.36	0.37	0.05	0.37	0.32									
57	0.47	0.35	0.38	0.28	0.36	0.16	0.36	0.25	0.35								
58	0.44	0.29	0.35	0.39	0.44	0.05	0.40	0.22	0.40	0.48							
59	0.41	0.34	0.30	0.46	0.43	0.07	0.39	0.15	0.33	0.37	0.45						
60	0.45	0.36	0.38	0.36	0.50	0.11	0.41	0.16	0.35	0.38	0.43	0.53					
61	0.56	0.39	0.44	0.47	0.47	0.11	0.47	0.17	0.34	0.36	0.41	0.51	0.52				
62	0.44	0.31	0.36	0.33	0.45	0.04	0.39	0.14	0.33	0.41	0.69	0.43	0.43	0.44			
63	0.62	0.49	0.57	0.36	0.52	0.19	0.52	0.23	0.35	0.44	0.44	0.40	0.44	0.48	0.48		
64	0.39	0.32	0.31	0.39	0.33	0.04	0.31	0.16	0.30	0.25	0.35	0.35	0.30	0.40	0.35	0.42	
65	0.09	0.01	-0.01	0.07	0.07	0.03	0.04	-0.04	0.14	0.05	0.16	0.07	0.11	0.05	0.16	0.05	0.10
66	0.18	0.16	0.13	0.20	0.21	0.18	0.24	0.29	0.29	0.16	0.24	0.23	0.21	0.17	0.20	0.16	0.21
67	0.07	0.08	0.22	0.17	0.11	0.31	0.18	0.44	0.18	0.15	0.14	0.09	0.10	0.01	0.09	0.13	0.04
68	0.20	0.19	0.14	0.23	0.17	0.11	0.22	0.15	0.14	0.11	0.15	0.14	0.09	0.14	0.20	0.15	0.18
69	0.41	0.28	0.37	0.24	0.34	0.10	0.26	0.16	0.24	0.32	0.28	0.21	0.27	0.35	0.26	0.42	0.14
70	0.41	0.34	0.45	0.17	0.35	0.10	0.31	0.12	0.25	0.32	0.36	0.27	0.29	0.30	0.37	0.40	0.24
71	0.25	0.24	0.21	0.05	0.19	0.16	0.13	0.14	0.12	0.24	0.20	0.15	0.15	0.17	0.20	0.26	0.15
72	0.47	0.40	0.36	0.34	0.43	0.09	0.40	0.23	0.42	0.33	0.42	0.40	0.37	0.46	0.44	0.46	0.63
73	0.29	0.28	0.29	0.29	0.33	0.09	0.40	0.19	0.20	0.34	0.32	0.21	0.32	0.20	0.31	0.34	0.15
74	0.28	0.20	0.31	0.33	0.26	0.18	0.30	0.29	0.29	0.18	0.21	0.18	0.20	0.25	0.17	0.25	0.20

BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN A														5
	64	65	66	67	68	69	70	71	72	73	74			
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63														
64														
65														
66	0.23													
67	0.00	0.54												
68	0.06	0.22	0.12											
69	0.05	0.12	0.16	0.08										
70	0.07	0.20	0.14	0.12	0.58									
71	0.05	0.14	0.18	0.06	0.54	0.47								
72	0.16	0.29	0.10	0.19	0.29	0.38	0.33							
73	0.08	0.15	0.18	0.17	0.27	0.33	0.21	0.25						
74	0.02	0.25	0.23	0.14	0.19	0.20	0.12	0.25	0.16					

	BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN B												1
		1	2	3	4	5	6	7	8	9	10	11	12
1	WGAAccessInformation_1												
2	WGAAccessToInfluentials_1	0.48											
3	WGAAssistingOthers_1	0.49	0.56										
4	WGABeingAtPeace_1	0.28	0.31	0.31									
5	WGABusiness_1	0.25	0.35	0.26	0.30								
6	WGACharacter_1	0.45	0.48	0.51	0.39	0.27							
7	WGAChildren_1	0.06	0.19	0.21	0.20	0.20	0.27						
8	WGAChildrenAchievements_1	0.27	0.30	0.37	0.34	0.19	0.42	0.35					
9	WGAChildrenBehaviour_1	0.18	0.25	0.30	0.28	0.10	0.41	0.32	0.67				
10	WGAChildrenUpbringing_1	0.29	0.26	0.35	0.24	0.15	0.32	0.20	0.54	0.46			
11	WGAClothing_1	0.40	0.47	0.43	0.42	0.36	0.49	0.28	0.38	0.33	0.35		
12	WGACommunityAssistance_1	0.45	0.60	0.50	0.32	0.27	0.44	0.20	0.38	0.31	0.24	0.43	
13	WGACommunityDecisions_1	0.54	0.67	0.54	0.32	0.42	0.49	0.24	0.34	0.29	0.29	0.51	0.56
14	WGACommunityDevelopment_1	0.49	0.74	0.55	0.32	0.39	0.47	0.23	0.31	0.25	0.23	0.49	0.60
15	WGACommunityFestivals_1	0.52	0.64	0.58	0.33	0.40	0.51	0.22	0.35	0.30	0.32	0.56	0.58
16	WGACommunityOrganisations_1	0.55	0.64	0.52	0.29	0.34	0.46	0.23	0.32	0.28	0.31	0.50	0.56
17	WGAConvenienceGoods_1	0.24	0.34	0.35	0.34	0.29	0.33	0.25	0.28	0.25	0.25	0.42	0.33
18	WGAEducationalInstitutes_1	0.46	0.41	0.45	0.27	0.28	0.39	0.16	0.28	0.22	0.30	0.39	0.41
19	WGAEducationfamily_1	0.33	0.33	0.34	0.19	0.21	0.37	0.26	0.35	0.30	0.40	0.39	0.28
20	WGAEducationSelf_1	0.31	0.26	0.22	0.29	0.25	0.29	0.10	0.16	0.14	0.17	0.27	0.26
21	WGAElectricity_1	0.21	0.32	0.27	0.32	0.28	0.31	0.19	0.25	0.14	0.14	0.48	0.33
22	WGAEquipment_1	0.11	0.17	0.16	0.19	0.16	0.10	0.18	0.17	0.13	0.09	0.15	0.16
23	WGAFamilyHardworking_1	0.35	0.33	0.36	0.36	0.23	0.48	0.19	0.33	0.36	0.29	0.38	0.36
24	WGAFamilyObligations_1	0.32	0.44	0.45	0.45	0.32	0.45	0.19	0.28	0.26	0.23	0.43	0.45
25	WGAFamilyRelations_1	0.31	0.40	0.43	0.42	0.26	0.52	0.35	0.48	0.44	0.38	0.42	0.45
26	WGAFamilyReputation_1	0.46	0.58	0.57	0.33	0.31	0.54	0.20	0.38	0.37	0.35	0.54	0.53
27	WGAFamilyRespect_1	0.45	0.57	0.60	0.34	0.32	0.56	0.20	0.38	0.37	0.34	0.53	0.54
28	WGAFamilyWorkSkills_1	0.34	0.24	0.27	0.26	0.14	0.33	0.11	0.27	0.29	0.31	0.37	0.24
29	WGAFood_1	0.35	0.44	0.39	0.42	0.35	0.44	0.30	0.38	0.32	0.33	0.84	0.40
30	WGAFoodProduction_1	0.31	0.41	0.32	0.27	0.26	0.28	0.19	0.18	0.14	0.15	0.35	0.33
31	WGAFriendships_1	0.44	0.34	0.49	0.26	0.17	0.37	0.11	0.27	0.25	0.26	0.27	0.42
32	WGAHealthFamilyMembers_1	0.38	0.28	0.32	0.32	0.21	0.41	0.16	0.33	0.31	0.27	0.40	0.30
33	WGAHealthSelf_1	0.23	0.20	0.23	0.32	0.24	0.31	0.09	0.23	0.23	0.18	0.28	0.29
34	WGAHouseholdGoods_1	0.37	0.42	0.38	0.42	0.38	0.44	0.32	0.31	0.23	0.26	0.58	0.37
35	WGAHouseOwnership_1	0.42	0.51	0.43	0.45	0.40	0.47	0.23	0.31	0.26	0.29	0.55	0.39
36	WGAHousing_1	0.32	0.42	0.34	0.36	0.38	0.38	0.28	0.35	0.21	0.30	0.57	0.36
37	WGAIncomeHousehold_1	0.27	0.28	0.20	0.42	0.43	0.31	0.14	0.25	0.21	0.26	0.49	0.23
38	WGAIncomePersonal_1	0.01	-0.02	0.05	0.00	-0.03	0.05	0.04	0.06	0.09	0.12	0.06	-0.03
39	WGAInlawsDecisions_1	0.35	0.43	0.42	0.42	0.30	0.42	0.24	0.38	0.32	0.30	0.35	0.42
40	WGAInLawsRespect_1	0.42	0.46	0.46	0.43	0.31	0.52	0.24	0.41	0.35	0.30	0.43	0.48
41	WGAInLawsSupportHelp_1	0.35	0.37	0.42	0.43	0.26	0.41	0.28	0.39	0.33	0.30	0.38	0.43
42	WGAKnowledgeAndSkills_1	0.55	0.33	0.42	0.30	0.17	0.37	0.05	0.17	0.10	0.17	0.32	0.33
43	WGALandHoldings_1	0.24	0.36	0.28	0.43	0.34	0.37	0.20	0.26	0.21	0.24	0.49	0.28
44	WGALeaders_1	0.45	0.68	0.54	0.32	0.34	0.52	0.26	0.39	0.28	0.30	0.53	0.56
45	WGALivestock_1	0.24	0.35	0.30	0.27	0.31	0.23	0.16	0.18	0.11	0.13	0.31	0.33
46	WGALoans_1	0.05	0.11	0.12	0.15	0.23	0.08	0.21	0.07	0.08	0.03	0.20	0.07
47	WGALocalityClean_1	0.46	0.55	0.46	0.35	0.29	0.53	0.26	0.34	0.32	0.31	0.49	0.51
48	WGALocalitySafe_1	0.34	0.36	0.33	0.23	0.21	0.39	0.14	0.22	0.21	0.20	0.37	0.42
49	WGAMarkets_1	0.49	0.44	0.46	0.30	0.20	0.50	0.23	0.35	0.33	0.31	0.44	0.43
50	WGAMarriages_1	0.19	0.18	0.23	0.22	0.16	0.23	0.18	0.29	0.27	0.26	0.27	0.18
51	WGANeighbourhoodRelations_1	0.48	0.54	0.51	0.35	0.29	0.47	0.28	0.40	0.35	0.33	0.51	0.59
52	WGAOccupationalSuccess_1	0.05	0.08	0.14	0.15	-0.01	0.15	0.05	0.12	0.15	0.06	0.13	0.15
53	WGAPersonalRespect_1	0.44	0.51	0.66	0.35	0.28	0.55	0.22	0.38	0.36	0.32	0.50	0.51
54	WGAPersonalWealth_1	0.24	0.27	0.22	0.30	0.24	0.20	0.03	0.09	0.08	0.13	0.26	0.23
55	WGAPhone_1	0.36	0.42	0.35	0.35	0.32	0.37	0.20	0.21	0.19	0.23	0.50	0.27
56	WGAPhysicalAppearance_1	0.43	0.35	0.38	0.38	0.23	0.40	0.11	0.28	0.23	0.26	0.32	0.35
57	WGARecreation_1	0.43	0.37	0.39	0.36	0.23	0.38	0.20	0.36	0.27	0.34	0.50	0.41
59	WGARelationsHusband_1	0.29	0.34	0.36	0.43	0.24	0.46	0.30	0.46	0.41	0.31	0.39	0.37
60	WGARelationsNatal_1	0.32	0.39	0.39	0.34	0.20	0.44	0.25	0.37	0.35	0.30	0.37	0.43
61	WGAReligion_1	0.32	0.52	0.41	0.37	0.30	0.60	0.21	0.35	0.36	0.27	0.45	0.42
62	WGARest_1	0.40	0.38	0.41	0.36	0.28	0.41	0.22	0.36	0.34	0.36	0.54	0.35
63	WGARoadsAndTransport_1	0.41	0.46	0.46	0.33	0.24	0.46	0.27	0.29	0.22	0.21	0.43	0.44
64	WGASafeWater_1	0.17	0.31	0.26	0.31	0.29	0.34	0.22	0.27	0.20	0.16	0.49	0.32
65	WGASalariedJob_1	0.09	0.10	0.06	0.06	0.08	0.05	0.04	0.10	0.13	0.08	0.14	0.09
66	WGASavingsHousehold_1	0.10	0.22	0.16	0.26	0.23	0.16	0.11	0.16	0.09	0.20	0.29	0.21
67	WGASavingsPersonal_1	0.13	0.09	0.06	0.20	0.13	0.07	0.00	0.04	0.01	0.16	0.16	0.10
68	WGASelfEmployment_1	0.16	0.10	0.04	0.24	0.27	0.15	0.11	0.08	0.12	0.15	0.22	0.06
69	WGAServicesGovt_1	0.38	0.32	0.30	0.10	0.15	0.20	-0.01	0.16	0.11	0.19	0.26	0.33
70	WGAServicesHealth_1	0.39	0.26	0.37	0.17	0.19	0.23	0.07	0.23	0.14	0.25	0.35	0.32
71	WGAServicesNGO_1	0.15	0.14	0.11	0.13	0.17	0.06	0.06	0.10	0.09	0.10	0.19	0.18
72	WGAToilet_1	0.36	0.42	0.37	0.36	0.34	0.42	0.25	0.30	0.21	0.28	0.59	0.43
73	WGATrustworthyFriend_1	0.38	0.29	0.46	0.22	0.18	0.39	0.13	0.23	0.23	0.24	0.30	0.33
74	WGAVehicle_1	0.07	0.14	0.16	0.17	0.16	0.12	0.13	0.10	0.07	0.13	0.18	0.15
	r. > | .07| has p < .05 ; r. > | .10| has p. <.01. (Two-tailed.) N=793												

	BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN B																2	
	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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14	0.83																	
15	0.73	0.71																
16	0.79	0.73	0.74															
17	0.32	0.35	0.34	0.34														
18	0.44	0.43	0.46	0.48	0.31													
19	0.34	0.33	0.27	0.33	0.35	0.33												
20	0.27	0.29	0.27	0.28	0.25	0.29	0.43											
21	0.32	0.30	0.35	0.30	0.32	0.27	0.15	0.19										
22	0.17	0.19	0.17	0.14	0.26	0.10	0.10	0.10	0.15									
23	0.39	0.34	0.43	0.39	0.29	0.40	0.32	0.23	0.24	0.05								
24	0.50	0.51	0.49	0.43	0.36	0.33	0.25	0.25	0.29	0.18	0.40							
25	0.45	0.43	0.43	0.41	0.33	0.37	0.33	0.27	0.29	0.17	0.40	0.57						
26	0.61	0.59	0.64	0.59	0.37	0.37	0.40	0.26	0.31	0.15	0.44	0.47	0.48					
27	0.63	0.60	0.66	0.61	0.36	0.39	0.39	0.24	0.33	0.14	0.44	0.49	0.50	0.88				
28	0.30	0.24	0.29	0.33	0.23	0.31	0.46	0.15	0.13	0.07	0.54	0.23	0.24	0.38	0.37			
29	0.49	0.46	0.53	0.47	0.44	0.36	0.37	0.27	0.44	0.16	0.40	0.46	0.42	0.53	0.51	0.34		
30	0.41	0.42	0.37	0.38	0.42	0.25	0.23	0.20	0.21	0.32	0.31	0.26	0.23	0.35	0.35	0.14	0.35	
31	0.41	0.37	0.41	0.40	0.17	0.34	0.29	0.21	0.21	0.10	0.29	0.30	0.32	0.37	0.39	0.25	0.22	0.10
32	0.37	0.33	0.38	0.36	0.30	0.31	0.33	0.25	0.25	0.12	0.43	0.36	0.35	0.39	0.39	0.44	0.36	0.18
33	0.26	0.29	0.26	0.24	0.31	0.25	0.22	0.28	0.21	0.10	0.42	0.31	0.30	0.33	0.32	0.29	0.26	0.23
34	0.47	0.46	0.46	0.45	0.55	0.37	0.34	0.24	0.42	0.22	0.35	0.39	0.38	0.42	0.47	0.25	0.57	0.44
35	0.52	0.51	0.51	0.48	0.48	0.40	0.35	0.34	0.38	0.27	0.44	0.45	0.44	0.49	0.49	0.29	0.57	0.47
36	0.44	0.41	0.38	0.40	0.44	0.29	0.33	0.26	0.41	0.19	0.30	0.40	0.39	0.37	0.40	0.26	0.57	0.41
37	0.27	0.27	0.29	0.28	0.42	0.28	0.32	0.25	0.29	0.20	0.32	0.30	0.31	0.28	0.30	0.31	0.49	0.35
38	-0.04	-0.08	0.01	0.00	0.16	0.03	0.12	0.05	0.01	0.08	0.02	0.03	0.03	0.02	0.06	0.14	0.09	0.01
39	0.48	0.46	0.44	0.45	0.27	0.36	0.30	0.30	0.23	0.17	0.39	0.48	0.51	0.40	0.38	0.23	0.34	0.20
40	0.54	0.53	0.54	0.52	0.29	0.39	0.34	0.31	0.28	0.14	0.47	0.55	0.58	0.51	0.50	0.27	0.42	0.25
41	0.43	0.46	0.42	0.39	0.29	0.38	0.29	0.32	0.27	0.21	0.39	0.47	0.57	0.37	0.35	0.21	0.35	0.24
42	0.42	0.37	0.40	0.41	0.29	0.35	0.21	0.21	0.24	0.16	0.32	0.29	0.26	0.36	0.36	0.27	0.30	0.27
43	0.36	0.36	0.38	0.37	0.50	0.23	0.29	0.29	0.34	0.25	0.40	0.40	0.34	0.37	0.37	0.28	0.53	0.42
44	0.64	0.63	0.60	0.61	0.36	0.48	0.36	0.26	0.39	0.17	0.37	0.45	0.52	0.56	0.58	0.21	0.48	0.34
45	0.43	0.44	0.36	0.36	0.34	0.27	0.19	0.25	0.28	0.38	0.25	0.31	0.26	0.35	0.36	0.13	0.34	0.50
46	0.15	0.14	0.11	0.10	0.14	0.06	0.14	0.15	0.15	0.08	0.15	0.15	0.13	0.16	0.17	0.11	0.17	0.13
47	0.61	0.55	0.56	0.55	0.32	0.49	0.36	0.27	0.27	0.10	0.45	0.47	0.52	0.47	0.51	0.29	0.50	0.31
48	0.40	0.40	0.41	0.40	0.21	0.39	0.24	0.14	0.28	0.11	0.31	0.31	0.37	0.45	0.46	0.27	0.31	0.19
49	0.50	0.44	0.53	0.52	0.27	0.63	0.31	0.26	0.28	0.10	0.45	0.35	0.40	0.48	0.49	0.41	0.43	0.23
50	0.24	0.19	0.23	0.20	0.21	0.13	0.17	0.16	0.16	0.10	0.17	0.21	0.28	0.21	0.19	0.12	0.22	0.14
51	0.58	0.55	0.63	0.56	0.29	0.38	0.35	0.26	0.27	0.17	0.44	0.45	0.49	0.65	0.63	0.37	0.46	0.28
52	0.07	0.08	0.13	0.06	0.19	0.12	0.01	0.06	0.16	0.05	0.21	0.10	0.07	0.13	0.14	0.12	0.15	0.02
53	0.60	0.56	0.60	0.57	0.30	0.42	0.38	0.26	0.30	0.13	0.46	0.47	0.46	0.75	0.78	0.38	0.49	0.30
54	0.25	0.28	0.28	0.24	0.32	0.24	0.10	0.16	0.19	0.14	0.20	0.25	0.14	0.26	0.25	0.17	0.32	0.29
55	0.45	0.44	0.40	0.44	0.57	0.30	0.33	0.29	0.32	0.23	0.27	0.40	0.31	0.40	0.42	0.27	0.49	0.44
56	0.40	0.39	0.37	0.45	0.31	0.37	0.35	0.29	0.14	0.11	0.32	0.34	0.39	0.34	0.36	0.35	0.32	0.21
57	0.45	0.43	0.38	0.41	0.37	0.34	0.35	0.27	0.28	0.15	0.31	0.40	0.41	0.40	0.43	0.27	0.44	0.36
59	0.39	0.37	0.36	0.33	0.29	0.32	0.30	0.24	0.26	0.20	0.38	0.49	0.67	0.41	0.41	0.25	0.37	0.22
60	0.43	0.42	0.38	0.37	0.28	0.38	0.30	0.24	0.22	0.12	0.36	0.46	0.52	0.43	0.44	0.29	0.37	0.21
61	0.54	0.53	0.50	0.46	0.30	0.41	0.33	0.32	0.30	0.15	0.43	0.52	0.53	0.46	0.48	0.23	0.43	0.30
62	0.47	0.41	0.42	0.46	0.33	0.34	0.37	0.22	0.29	0.08	0.37	0.41	0.45	0.47	0.49	0.36	0.48	0.21
63	0.53	0.48	0.50	0.52	0.23	0.53	0.28	0.19	0.29	0.11	0.38	0.41	0.44	0.41	0.44	0.29	0.38	0.22
64	0.33	0.35	0.33	0.27	0.37	0.26	0.21	0.19	0.43	0.18	0.24	0.33	0.32	0.34	0.34	0.12	0.48	0.33
65	0.09	0.12	0.06	0.07	0.20	0.10	0.21	0.15	0.07	0.04	0.10	0.08	0.04	0.06	0.08	0.06	0.12	0.11
66	0.14	0.21	0.19	0.15	0.40	0.19	0.21	0.20	0.22	0.17	0.17	0.26	0.17	0.24	0.24	0.18	0.31	0.26
67	0.06	0.07	0.11	0.08	0.19	0.17	0.12	0.16	0.16	0.08	0.11	0.18	0.07	0.11	0.09	0.20	0.22	0.10
68	0.17	0.11	0.11	0.16	0.17	0.12	0.14	0.08	0.10	0.17	0.17	0.14	0.12	0.16	0.17	0.23	0.23	0.10
69	0.39	0.37	0.33	0.39	0.14	0.44	0.24	0.18	0.08	0.09	0.24	0.21	0.19	0.23	0.25	0.21	0.25	0.19
70	0.31	0.31	0.33	0.37	0.28	0.57	0.26	0.17	0.20	0.08	0.28	0.21	0.25	0.29	0.33	0.24	0.31	0.25
71	0.17	0.17	0.16	0.19	0.14	0.21	0.07	0.04	0.15	0.03	0.12	0.12	0.10	0.04	0.05	0.09	0.14	0.03
72	0.45	0.45	0.46	0.42	0.43	0.38	0.29	0.25	0.55	0.21	0.29	0.37	0.35	0.42	0.42	0.20	0.57	0.40
73	0.39	0.32	0.34	0.38	0.17	0.32	0.25	0.14	0.13	0.07	0.28	0.29	0.29	0.37	0.41	0.27	0.25	0.14
74	0.14	0.19	0.20	0.15	0.26	0.14	0.11	0.14	0.14	0.25	0.16	0.13	0.08	0.16	0.14	0.10	0.21	0.24

	BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN B															3	
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
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32	0.26																
33	0.11	0.52															
34	0.24	0.33	0.25														
35	0.27	0.35	0.28	0.49													
36	0.22	0.32	0.25	0.55	0.51												
37	0.12	0.31	0.27	0.45	0.46	0.47											
38	0.00	0.01	0.02	0.06	0.06	0.05	0.09										
39	0.34	0.36	0.29	0.32	0.39	0.34	0.24	-0.04									
40	0.37	0.37	0.29	0.40	0.46	0.38	0.27	-0.04	0.78								
41	0.27	0.38	0.30	0.38	0.43	0.33	0.23	-0.01	0.73	0.73							
42	0.32	0.23	0.22	0.30	0.36	0.23	0.21	0.08	0.29	0.32	0.29						
43	0.13	0.29	0.31	0.47	0.69	0.49	0.49	0.10	0.30	0.39	0.35	0.31					
44	0.39	0.30	0.25	0.46	0.48	0.46	0.28	-0.03	0.42	0.51	0.40	0.35	0.34				
45	0.17	0.19	0.22	0.33	0.45	0.37	0.27	0.01	0.19	0.27	0.25	0.25	0.37	0.38			
46	0.07	0.13	0.10	0.20	0.17	0.16	0.20	0.19	0.13	0.15	0.15	0.08	0.15	0.15	0.16		
47	0.33	0.34	0.24	0.44	0.50	0.45	0.31	-0.04	0.45	0.51	0.43	0.35	0.33	0.59	0.27	0.05	
48	0.23	0.32	0.21	0.27	0.33	0.30	0.22	-0.03	0.29	0.37	0.32	0.24	0.20	0.46	0.24	0.10	0.50
49	0.35	0.37	0.22	0.37	0.44	0.29	0.20	0.08	0.34	0.38	0.37	0.35	0.24	0.49	0.25	0.08	0.53
50	0.17	0.24	0.11	0.25	0.26	0.26	0.14	0.02	0.23	0.24	0.25	0.11	0.22	0.19	0.08	0.05	0.16
51	0.41	0.37	0.26	0.38	0.45	0.37	0.28	-0.03	0.45	0.50	0.41	0.36	0.30	0.57	0.32	0.13	0.57
52	0.13	0.06	0.18	0.07	0.10	0.02	0.06	0.43	0.07	0.04	0.08	0.27	0.14	0.15	0.04	0.02	0.12
53	0.41	0.40	0.29	0.42	0.46	0.34	0.27	0.07	0.37	0.48	0.35	0.34	0.34	0.52	0.34	0.17	0.45
54	0.14	0.12	0.15	0.28	0.38	0.25	0.26	0.16	0.14	0.16	0.16	0.32	0.36	0.17	0.35	0.05	0.20
55	0.16	0.31	0.23	0.52	0.51	0.44	0.42	0.03	0.27	0.34	0.29	0.25	0.45	0.41	0.34	0.17	0.38
56	0.42	0.32	0.23	0.36	0.35	0.31	0.32	0.01	0.41	0.40	0.36	0.35	0.26	0.36	0.20	0.02	0.47
57	0.39	0.36	0.28	0.49	0.40	0.41	0.37	-0.05	0.37	0.40	0.38	0.29	0.35	0.43	0.28	0.08	0.43
59	0.27	0.34	0.31	0.38	0.39	0.36	0.32	-0.03	0.49	0.56	0.52	0.25	0.34	0.45	0.25	0.12	0.41
60	0.37	0.32	0.26	0.29	0.40	0.29	0.24	-0.01	0.44	0.48	0.43	0.23	0.27	0.46	0.24	0.14	0.45
61	0.24	0.32	0.28	0.37	0.50	0.38	0.28	-0.02	0.43	0.51	0.45	0.27	0.39	0.55	0.28	0.09	0.55
62	0.37	0.35	0.24	0.47	0.39	0.38	0.36	-0.01	0.37	0.42	0.38	0.29	0.33	0.42	0.20	0.13	0.43
63	0.39	0.28	0.20	0.33	0.43	0.37	0.24	0.03	0.40	0.46	0.41	0.33	0.30	0.52	0.26	0.06	0.61
64	0.12	0.23	0.25	0.43	0.40	0.48	0.33	-0.01	0.22	0.28	0.24	0.17	0.41	0.33	0.32	0.11	0.28
65	0.03	0.11	0.09	0.17	0.07	0.15	0.27	0.01	0.09	0.10	0.07	0.06	0.15	0.08	0.05	0.14	0.07
66	0.11	0.22	0.18	0.28	0.38	0.35	0.40	0.10	0.17	0.18	0.17	0.17	0.45	0.23	0.19	0.17	0.18
67	0.15	0.09	0.01	0.16	0.21	0.15	0.21	0.22	0.06	0.06	0.08	0.20	0.25	0.09	0.10	0.12	0.07
68	0.02	0.16	0.15	0.23	0.20	0.26	0.32	0.07	0.08	0.09	0.08	0.05	0.20	0.07	0.15	0.10	0.17
69	0.26	0.14	0.14	0.19	0.30	0.18	0.21	-0.05	0.20	0.27	0.26	0.25	0.18	0.38	0.20	-0.02	0.40
70	0.29	0.21	0.17	0.32	0.28	0.26	0.26	-0.01	0.22	0.30	0.25	0.25	0.17	0.34	0.20	0.04	0.38
71	0.14	0.11	0.10	0.13	0.14	0.15	0.14	-0.05	0.14	0.14	0.14	0.11	0.05	0.19	0.07	0.18	0.20
72	0.22	0.34	0.29	0.57	0.52	0.57	0.39	-0.07	0.29	0.35	0.32	0.27	0.43	0.45	0.38	0.19	0.44
73	0.57	0.23	0.12	0.28	0.27	0.23	0.21	0.07	0.28	0.34	0.26	0.24	0.14	0.35	0.17	0.18	0.35
74	0.05	0.06	0.09	0.19	0.22	0.18	0.19	0.06	0.14	0.12	0.15	0.23	0.24	0.17	0.25	0.10	0.15

	BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN B															4	
	48	49	50	51	52	53	54	55	56	57	59	60	61	62	63	64	65
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49	0.44																
50	0.16	0.21															
51	0.49	0.47	0.23														
52	0.12	0.24	-0.01	0.06													
53	0.46	0.57	0.21	0.58	0.18												
54	0.12	0.26	0.13	0.18	0.18	0.26											
55	0.23	0.35	0.22	0.33	0.01	0.35	0.30										
56	0.24	0.35	0.15	0.34	0.06	0.31	0.16	0.32									
57	0.23	0.34	0.23	0.42	0.01	0.38	0.25	0.42	0.40								
59	0.27	0.31	0.23	0.41	0.05	0.39	0.15	0.32	0.35	0.38							
60	0.35	0.39	0.18	0.47	0.10	0.42	0.13	0.30	0.34	0.37	0.47						
61	0.35	0.41	0.23	0.43	0.08	0.44	0.18	0.35	0.33	0.36	0.48	0.47					
62	0.27	0.38	0.17	0.43	-0.02	0.41	0.17	0.37	0.42	0.68	0.42	0.38	0.39				
63	0.41	0.58	0.17	0.49	0.14	0.47	0.21	0.31	0.39	0.38	0.36	0.39	0.44	0.38			
64	0.20	0.22	0.20	0.26	0.00	0.30	0.22	0.33	0.20	0.31	0.30	0.21	0.36	0.30	0.25		
65	0.00	-0.01	0.01	0.08	0.03	0.06	-0.05	0.19	0.03	0.13	0.05	0.07	0.06	0.13	0.00	0.04	
66	0.14	0.11	0.12	0.19	0.19	0.19	0.32	0.29	0.13	0.21	0.22	0.18	0.16	0.17	0.12	0.19	0.17
67	0.05	0.18	0.09	0.09	0.24	0.11	0.42	0.19	0.12	0.13	0.09	0.06	0.00	0.12	0.12	0.02	0.01
68	0.14	0.11	0.10	0.15	0.07	0.18	0.09	0.18	0.19	0.14	0.14	0.08	0.15	0.18	0.11	0.14	0.01
69	0.24	0.36	0.11	0.31	0.06	0.24	0.14	0.22	0.28	0.27	0.21	0.24	0.34	0.26	0.43	0.10	0.07
70	0.23	0.44	0.10	0.30	0.10	0.30	0.15	0.23	0.29	0.37	0.24	0.26	0.23	0.34	0.35	0.18	0.07
71	0.12	0.11	0.05	0.10	0.08	0.04	0.07	0.10	0.13	0.15	0.15	0.07	0.17	0.13	0.21	0.09	0.04
72	0.35	0.35	0.21	0.41	0.03	0.39	0.26	0.45	0.27	0.43	0.33	0.32	0.40	0.37	0.35	0.61	0.12
73	0.27	0.32	0.21	0.39	0.08	0.45	0.17	0.24	0.35	0.30	0.27	0.34	0.25	0.32	0.36	0.11	0.04
74	0.10	0.19	0.11	0.13	0.15	0.14	0.24	0.21	0.07	0.12	0.11	0.11	0.15	0.10	0.10	0.17	0.01

	BANGLADESH WEIGHTED GOAL SATISFACTION - ALGORITHMN B												5
	66	67	68	69	70	71	72	73	74				
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67	0.58												
68	0.18	0.09											
69	0.14	0.14	0.01										
70	0.21	0.13	0.08	0.52									
71	0.14	0.13	0.02	0.48	0.32								
72	0.27	0.08	0.17	0.17	0.30	0.16							
73	0.12	0.14	0.14	0.29	0.31	0.13	0.24						
74	0.24	0.23	0.05	0.14	0.13	0.00	0.21	0.04					

	URBAN UNWEIGHTED GOAL SATISFACTION -DUGS												1
		1	2	3	4	5	6	7	8	9	10	11	12
1	SMEAN(AccessInformation)												
2	SMEAN(AccessToInfluentials)	0.18											
3	SMEAN(AssistingOthers)	0.34	0.37										
4	SMEAN(BeingAtPeace)	0.26	0.08	0.18									
5	SMEAN(Business)	0.08	0.17	0.27	0.20								
6	SMEAN(Character)	0.04	0.05	0.24	0.30	0.11							
7	SMEAN(Children)	-0.15	0.00	0.09	0.12	0.08	0.20						
8	SMEAN(ChildrenAchievements)	0.14	0.12	0.37	0.31	0.09	0.23	0.17					
9	SMEAN(ChildrenBehaviour)	-0.16	-0.01	0.06	0.22	-0.04	0.40	0.35	0.48				
10	SMEAN(ChildrenUpbringing)	0.15	0.23	0.35	0.24	0.14	0.24	0.13	0.60	0.37			
11	SMEAN(Clothing)	0.10	0.20	0.23	0.37	0.31	0.40	0.17	0.25	0.21	0.26		
12	SMEAN(CommunityAssistance)	0.18	0.24	0.30	0.13	0.06	0.06	0.16	0.21	0.03	0.20	0.10	
13	SMEAN(CommunityDecisions)	0.20	0.29	0.19	0.09	0.24	-0.04	0.03	-0.01	-0.06	0.05	0.16	0.20
14	SMEAN(CommunityDevelopment)	0.17	0.44	0.23	0.09	0.19	-0.05	0.04	0.05	-0.01	0.14	0.18	0.20
15	SMEAN(CommunityFestivals)	0.15	0.28	0.39	0.19	0.27	0.19	0.10	0.19	0.10	0.27	0.26	0.15
16	SMEAN(CommunityOrganisations)	0.24	0.43	0.26	0.09	0.15	0.01	0.00	0.12	0.03	0.20	0.23	0.21
17	SMEAN(ConvenienceGoods)	0.01	0.28	0.35	0.21	0.32	0.34	0.26	0.32	0.30	0.28	0.39	0.25
18	SMEAN(CookingFacilities)	0.11	0.14	0.23	0.19	0.14	0.18	0.21	0.21	0.16	0.17	0.38	0.19
19	SMEAN(EducationalInstitutes)	0.18	0.11	0.17	0.16	0.07	0.01	0.00	0.15	0.02	0.12	0.16	0.13
20	SMEAN(Educationfamily)	0.09	0.28	0.27	0.28	0.27	0.39	0.26	0.31	0.28	0.31	0.40	0.08
21	SMEAN(EducationSelf)	0.17	0.19	0.13	0.32	0.14	0.33	0.06	0.12	0.20	0.14	0.32	-0.01
22	SMEAN(Electricity)	0.03	0.12	0.15	0.04	0.07	0.12	0.16	0.12	0.03	0.08	0.43	0.23
23	SMEAN(Equipment)	0.19	0.04	0.12	0.11	0.07	0.00	0.14	0.13	0.04	0.06	0.15	0.20
24	SMEAN(FamilyHardworking)	0.04	0.14	0.17	0.34	0.23	0.40	0.17	0.18	0.28	0.25	0.37	0.11
25	SMEAN(FamilyObligations)	0.23	0.08	0.27	0.33	0.26	0.22	0.05	0.19	0.09	0.21	0.29	0.13
26	SMEAN(FamilyRelations)	0.17	0.13	0.35	0.39	0.16	0.31	0.24	0.43	0.29	0.36	0.22	0.25
27	SMEAN(FamilyReputation)	0.06	0.23	0.44	0.26	0.28	0.49	0.14	0.26	0.36	0.27	0.44	0.21
28	SMEAN(FamilyRespect)	0.08	0.23	0.49	0.26	0.26	0.47	0.16	0.23	0.34	0.26	0.44	0.18
29	SMEAN(FamilyWorkSkills)	0.10	0.15	0.18	0.33	0.21	0.40	0.16	0.17	0.28	0.21	0.43	0.07
30	SMEAN(Food)	0.10	0.19	0.21	0.41	0.30	0.36	0.21	0.21	0.19	0.25	0.81	0.11
31	SMEAN(FoodProduction)	0.11	0.14	0.22	-0.01	0.12	0.00	0.04	-0.01	-0.08	-0.03	0.09	0.00
32	SMEAN(Friendships)	0.37	0.12	0.41	0.33	0.10	0.12	0.09	0.26	0.05	0.22	0.18	0.23
33	SMEAN(HealthFamilyMembers)	0.04	0.12	0.17	0.23	0.20	0.22	0.01	0.20	0.17	0.19	0.33	0.16
34	SMEAN(HealthSelf)	0.11	0.08	0.19	0.26	0.12	0.25	0.07	0.20	0.22	0.20	0.32	0.11
35	SMEAN(HouseholdGoods)	0.13	0.20	0.39	0.35	0.35	0.29	0.37	0.29	0.22	0.25	0.59	0.28
36	SMEAN(HouseOwnership)	0.17	0.32	0.25	0.29	0.31	0.25	0.06	0.16	0.12	0.17	0.35	0.05
37	SMEAN(Housing)	0.21	0.07	0.25	0.21	0.19	0.13	0.18	0.23	0.05	0.21	0.42	0.18
38	SMEAN(IncomeHousehold)	0.19	0.18	0.16	0.48	0.31	0.36	0.08	0.24	0.19	0.26	0.52	0.13
39	SMEAN(IncomePersonal)	0.08	0.02	0.04	0.06	0.06	0.25	0.13	0.09	0.24	0.18	0.19	0.02
40	SMEAN(InLawsDecisions)	0.20	0.12	0.21	0.34	0.13	0.08	0.03	0.24	0.12	0.21	0.08	0.24
41	SMEAN(InLawsRespect)	0.25	0.10	0.27	0.36	0.15	0.13	0.09	0.31	0.20	0.26	0.14	0.20
42	SMEAN(InLawsSupportHelp)	0.15	0.13	0.17	0.31	0.10	0.01	0.10	0.27	0.17	0.23	0.08	0.29
43	SMEAN(KnowledgeAndSkills)	0.75	0.18	0.36	0.28	0.15	0.16	-0.11	0.19	-0.06	0.21	0.19	0.17
44	SMEAN(LandHoldings)	0.15	0.26	0.24	0.28	0.31	0.35	0.11	0.19	0.21	0.22	0.36	0.10
45	SMEAN(Leaders)	0.23	0.40	0.39	0.15	0.22	0.10	0.12	0.29	0.06	0.26	0.19	0.25
46	SMEAN(Livestock)	0.06	-0.02	0.03	0.08	0.11	0.04	0.04	-0.04	-0.01	0.02	0.11	0.00
47	SMEAN(Loans)	-0.01	0.12	0.21	0.17	0.19	0.25	0.22	0.17	0.23	0.14	0.30	0.06
48	SMEAN(LocalityClean)	0.11	0.12	0.11	0.27	0.03	0.10	-0.02	0.11	-0.02	0.15	0.11	0.27
49	SMEAN(LocalitySafe)	-0.13	-0.01	-0.06	0.03	0.06	0.17	0.14	-0.02	0.23	-0.02	0.10	0.08
50	SMEAN(Markets)	-0.07	0.03	0.01	0.21	0.12	0.40	0.21	0.09	0.37	0.05	0.27	0.01
51	SMEAN(Marriages)	-0.02	0.06	0.17	0.06	0.01	0.05	0.10	0.17	0.21	0.15	0.14	0.09
52	SMEAN(NeighbourhoodRelations)	0.09	0.18	0.27	0.29	0.22	0.31	0.30	0.25	0.24	0.17	0.33	0.29
53	SMEAN(OccupationalSuccess)	0.05	-0.03	-0.03	0.06	0.07	0.22	0.12	0.02	0.21	0.10	0.12	0.04
54	SMEAN(PersonalRespect)	0.01	0.16	0.45	0.21	0.23	0.48	0.19	0.20	0.33	0.22	0.38	0.09
55	SMEAN(PersonalWealth)	0.06	0.06	0.11	0.07	0.25	0.11	-0.01	0.01	0.03	0.12	0.22	0.08
56	SMEAN(Phone)	0.05	0.15	0.20	0.25	0.30	0.27	0.15	0.08	0.13	0.11	0.35	0.04
57	SMEAN(PhysicalAppearance)	0.38	0.15	0.24	0.63	0.15	0.27	-0.01	0.28	0.13	0.25	0.32	0.13
58	SMEAN(Recreation)	0.22	0.23	0.36	0.31	0.14	0.12	0.06	0.39	0.12	0.36	0.50	0.23
59	SMEAN(RelationsHusband)	0.22	0.14	0.31	0.41	0.17	0.28	0.13	0.40	0.29	0.36	0.22	0.23
60	SMEAN(RelationsNatal)	-0.09	0.03	0.13	0.34	0.15	0.23	0.17	0.25	0.28	0.14	0.16	0.12
61	SMEAN(Religion)	0.07	0.17	0.15	0.26	0.13	0.36	-0.04	0.09	0.24	0.24	0.20	0.05
62	SMEAN(Rest)	0.14	0.28	0.32	0.41	0.23	0.24	0.09	0.38	0.23	0.33	0.51	0.15
63	SMEAN(RoadsAndTransport)	0.06	0.06	0.04	0.12	-0.10	-0.05	0.06	0.09	-0.03	0.03	0.04	0.19
64	SMEAN(SafeWater)	0.05	0.11	0.24	0.12	0.05	0.30	0.22	0.20	0.20	0.12	0.46	0.14
65	SMEAN(SalariedJob)	0.08	0.10	0.05	0.10	-0.08	0.08	-0.01	0.07	0.15	0.07	0.15	0.13
66	SMEAN(SavingsHousehold)	0.10	0.30	0.17	0.25	0.28	0.18	0.12	0.16	0.11	0.27	0.25	0.15
67	SMEAN(SavingsPersonal)	0.15	0.12	0.04	0.16	0.18	0.10	0.01	0.05	0.01	0.15	0.17	0.05
68	SMEAN(SelfEmployment)	0.04	0.10	-0.02	0.21	0.11	0.18	0.12	-0.01	0.15	0.12	0.25	0.07
69	SMEAN(ServicesGovt)	0.13	0.10	-0.09	0.04	-0.06	-0.29	-0.15	-0.07	-0.18	0.03	-0.14	0.12
70	SMEAN(ServicesHealth)	0.26	0.14	0.27	0.17	0.12	-0.05	-0.05	0.22	-0.08	0.12	0.16	0.21
71	SMEAN(ServicesNGO)	0.09	0.02	-0.08	0.03	0.00	-0.25	-0.03	-0.05	-0.13	0.05	-0.11	0.18
72	SMEAN(Toilet)	0.13	0.14	0.31	0.13	0.14	0.25	0.21	0.18	0.09	0.14	0.46	0.20
73	SMEAN(TrustworthyFriend)	0.27	0.08	0.32	0.31	0.13	0.18	0.04	0.15	-0.01	0.15	0.19	0.12
74	SMEAN(Vehicle)	0.08	0.13	0.15	0.11	0.23	0.09	0.15	0.09	0.11	0.12	0.15	0.02

r. > | .10| has p < .05; r. > | .20| has p. <.01. (Two-tailed). N=394

		URBAN UNWEIGHTED GOAL SATISFACTION -DUGS																2
	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
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4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14	0.77																	
15	0.29	0.34																
16	0.44	0.53	0.35															
17	0.12	0.20	0.31	0.27														
18	0.12	0.13	0.19	0.17	0.14													
19	0.10	0.17	0.08	0.11	0.13	0.07												
20	0.18	0.19	0.16	0.19	0.43	0.18	0.17											
21	0.18	0.22	0.11	0.12	0.30	0.15	0.16	0.51										
22	0.10	0.11	0.06	0.11	0.18	0.50	0.05	0.10	0.12									
23	0.06	0.05	0.18	0.21	0.10	0.19	0.06	0.03	0.03	0.16								
24	0.02	0.05	0.17	0.05	0.33	0.12	0.16	0.32	0.35	0.09	-0.10							
25	0.14	0.11	0.20	0.14	0.19	0.10	0.14	0.27	0.17	0.06	0.15	0.25						
26	0.07	0.11	0.21	0.13	0.30	0.25	0.19	0.30	0.16	0.12	0.12	0.25	0.49					
27	0.09	0.16	0.45	0.17	0.45	0.26	0.03	0.30	0.26	0.28	0.11	0.31	0.28	0.33				
28	0.10	0.18	0.40	0.20	0.45	0.28	0.07	0.32	0.25	0.31	0.08	0.30	0.30	0.34	0.90			
29	0.04	0.07	0.21	0.10	0.38	0.16	0.16	0.50	0.38	0.07	0.01	0.67	0.24	0.22	0.33	0.35		
30	0.19	0.18	0.21	0.23	0.37	0.44	0.13	0.37	0.30	0.44	0.13	0.33	0.36	0.30	0.40	0.43	0.35	
31	-0.08	-0.02	0.10	0.06	0.19	0.05	-0.13	0.03	-0.02	0.14	0.21	0.01	-0.02	-0.05	0.13	0.15	0.08	
32	0.16	0.09	0.13	0.15	0.23	0.17	0.07	0.18	0.15	0.11	0.13	0.17	0.23	0.31	0.10	0.13	0.17	
33	0.16	0.22	0.11	0.12	0.24	0.18	0.08	0.34	0.30	0.16	-0.02	0.50	0.27	0.22	0.23	0.21	0.51	
34	0.14	0.21	0.22	0.08	0.25	0.25	0.09	0.24	0.37	0.14	0.04	0.48	0.23	0.25	0.25	0.25	0.43	
35	0.30	0.30	0.28	0.28	0.53	0.46	0.18	0.37	0.31	0.44	0.24	0.27	0.24	0.35	0.41	0.44	0.24	
36	0.10	0.17	0.18	0.20	0.41	0.15	0.10	0.34	0.29	0.17	0.08	0.33	0.27	0.26	0.34	0.32	0.31	
37	0.20	0.21	0.16	0.19	0.22	0.42	0.06	0.19	0.13	0.36	0.13	0.18	0.24	0.29	0.18	0.22	0.20	
38	0.08	0.12	0.16	0.20	0.31	0.19	0.19	0.37	0.26	0.11	0.11	0.43	0.37	0.33	0.30	0.31	0.45	
39	0.00	-0.03	0.11	0.05	0.24	0.07	0.02	0.17	0.09	0.01	0.03	0.13	0.06	0.08	0.16	0.18	0.23	
40	0.16	0.11	0.01	0.11	0.13	0.08	0.14	0.18	0.18	0.02	0.09	0.22	0.39	0.43	0.00	0.00	0.12	
41	0.16	0.15	0.11	0.16	0.22	0.16	0.16	0.23	0.23	0.01	0.07	0.29	0.42	0.52	0.15	0.13	0.17	
42	0.20	0.21	0.12	0.18	0.20	0.13	0.16	0.16	0.19	0.02	0.19	0.20	0.34	0.43	0.05	0.02	0.08	
43	0.13	0.13	0.14	0.22	0.15	0.20	0.21	0.19	0.26	0.07	0.17	0.06	0.27	0.21	0.13	0.17	0.12	
44	0.10	0.17	0.22	0.21	0.48	0.18	0.01	0.39	0.34	0.15	0.07	0.39	0.30	0.25	0.36	0.36	0.35	
45	0.33	0.33	0.28	0.30	0.26	0.23	0.21	0.31	0.17	0.12	0.14	0.08	0.15	0.30	0.19	0.22	0.01	
46	0.01	-0.01	0.04	0.04	0.13	0.06	-0.14	0.12	0.03	0.13	0.30	0.04	0.07	0.07	0.11	0.12	0.07	
47	0.05	0.07	0.08	0.03	0.31	0.12	0.02	0.27	0.18	0.17	0.07	0.31	0.23	0.14	0.36	0.36	0.29	
48	0.19	0.17	0.11	0.16	0.04	0.15	0.28	0.10	0.05	0.01	0.05	0.07	0.16	0.19	0.05	0.07	0.02	
49	0.00	0.07	0.11	0.02	0.13	0.10	0.00	0.09	0.07	0.07	-0.04	0.13	0.08	0.10	0.27	0.31	0.09	
50	0.03	0.08	0.13	0.04	0.29	0.15	0.29	0.25	0.33	0.15	0.01	0.30	0.09	0.08	0.43	0.41	0.32	
51	0.03	0.00	0.00	0.08	0.07	0.18	0.03	0.13	0.11	0.11	0.06	0.15	0.01	0.24	0.03	0.07	0.13	
52	0.18	0.18	0.26	0.15	0.31	0.30	-0.02	0.27	0.23	0.19	0.10	0.31	0.31	0.35	0.40	0.42	0.25	
53	0.02	-0.01	0.07	-0.02	0.18	0.03	0.04	0.08	0.09	0.04	-0.01	0.13	-0.01	0.04	0.15	0.18	0.20	
54	0.11	0.16	0.30	0.14	0.37	0.27	0.04	0.33	0.23	0.28	0.03	0.31	0.27	0.34	0.75	0.82	0.33	
55	0.08	0.11	0.15	0.15	0.28	0.02	-0.03	0.12	0.08	0.13	0.07	0.16	0.11	0.06	0.24	0.25	0.14	
56	0.08	0.13	0.19	0.13	0.53	0.13	0.08	0.35	0.29	0.18	0.09	0.28	0.22	0.18	0.34	0.35	0.34	
57	0.13	0.13	0.13	0.21	0.19	0.14	0.24	0.27	0.33	0.00	0.16	0.22	0.36	0.33	0.14	0.13	0.23	
58	0.17	0.24	0.20	0.24	0.31	0.35	0.16	0.30	0.19	0.30	0.17	0.23	0.25	0.34	0.25	0.23	0.24	
59	0.13	0.15	0.22	0.14	0.28	0.13	0.17	0.29	0.21	0.02	0.17	0.25	0.41	0.63	0.30	0.28	0.21	
60	0.00	0.09	0.13	-0.03	0.24	0.06	0.11	0.18	0.12	-0.06	0.07	0.28	0.40	0.42	0.29	0.27	0.23	
61	0.11	0.11	0.16	0.07	0.18	0.13	0.18	0.22	0.24	0.05	-0.02	0.33	0.26	0.29	0.29	0.31	0.22	
62	0.12	0.19	0.25	0.20	0.34	0.34	0.18	0.36	0.31	0.25	0.16	0.31	0.27	0.30	0.37	0.33	0.25	
63	-0.02	0.00	0.02	0.08	-0.05	0.07	0.17	0.05	-0.06	0.08	0.04	0.05	0.09	0.20	-0.04	-0.03	0.03	
64	0.04	0.06	0.11	0.08	0.26	0.58	0.11	0.18	0.17	0.58	0.13	0.19	0.10	0.18	0.37	0.38	0.18	
65	0.03	-0.01	-0.02	0.06	0.16	0.06	0.12	0.20	0.14	0.08	0.08	0.15	0.07	0.08	0.06	0.05	0.16	
66	0.17	0.22	0.17	0.12	0.39	0.01	0.10	0.30	0.27	0.05	0.06	0.32	0.28	0.22	0.25	0.26	0.28	
67	0.06	0.06	0.08	0.02	0.18	0.00	0.08	0.18	0.18	-0.01	0.01	0.15	0.22	0.10	0.10	0.11	0.20	
68	0.18	0.17	0.08	0.11	0.12	0.14	0.06	0.13	0.18	0.08	0.08	0.17	0.18	0.11	0.16	0.19	0.25	
69	0.07	0.11	-0.10	0.09	-0.16	-0.11	0.31	-0.03	-0.01	-0.24	0.00	0.04	0.00	-0.03	-0.31	-0.34	-0.05	
70	0.15	0.17	0.10	0.15	0.13	0.12	0.65	0.06	0.09	0.04	0.11	0.09	0.16	0.24	0.05	0.09	0.10	
71	0.11	0.05	-0.07	0.10	-0.08	-0.07	0.29	0.02	-0.02	-0.16	0.04	0.03	0.01	0.02	-0.23	-0.22	-0.05	
72	0.13	0.12	0.17	0.16	0.26	0.61	0.08	0.20	0.16	0.59	0.15	0.10	0.18	0.21	0.32	0.34	0.16	
73	0.09	0.01	0.15	0.11	0.14	0.16	0.09	0.14	0.15	0.05	0.10	0.20	0.27	0.23	0.18	0.21	0.18	
74	0.01	0.06	0.17	0.17	0.22	0.10	-0.09	0.14	0.13	0.01	0.36	0.08	0.06	0.05	0.15	0.15	0.07	

		URBAN UNWEIGHTED GOAL SATISFACTION -DUGS															3
	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
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27																	
28																	
29																	
30																	
31	0.08																
32	0.18	0.20															
33	0.29	-0.02	0.14														
34	0.30	-0.01	0.12	0.66													
35	0.60	0.18	0.35	0.23	0.21												
36	0.36	0.24	0.24	0.24	0.21	0.27											
37	0.45	0.07	0.24	0.22	0.26	0.43	0.11										
38	0.54	0.01	0.23	0.35	0.32	0.37	0.48	0.26									
39	0.17	0.00	-0.01	0.07	0.15	0.14	0.14	0.05	0.21								
40	0.09	-0.07	0.29	0.16	0.19	0.15	0.18	0.14	0.20	-0.06							
41	0.15	-0.06	0.28	0.16	0.21	0.23	0.26	0.14	0.24	0.01	0.83						
42	0.09	-0.08	0.20	0.15	0.19	0.21	0.16	0.13	0.15	-0.03	0.81	0.81					
43	0.17	0.14	0.43	0.04	0.10	0.22	0.26	0.23	0.20	0.16	0.20	0.25	0.13				
44	0.40	0.20	0.23	0.30	0.28	0.36	0.74	0.21	0.51	0.23	0.15	0.28	0.20	0.26			
45	0.21	0.02	0.25	0.06	0.09	0.38	0.15	0.24	0.09	0.03	0.22	0.27	0.23	0.26	0.15		
46	0.11	0.35	0.10	0.05	0.05	0.16	0.20	0.11	0.09	0.07	-0.07	0.00	-0.04	0.07	0.18	0.01	
47	0.30	0.09	0.16	0.14	0.17	0.32	0.26	0.15	0.32	0.21	0.08	0.15	0.10	0.06	0.32	0.12	0.05
48	0.16	-0.19	0.07	0.05	0.01	0.14	0.04	0.25	0.22	-0.04	0.21	0.14	0.14	0.08	0.02	0.22	-0.05
49	0.14	-0.14	-0.20	0.15	0.13	0.08	0.09	0.03	0.08	0.06	-0.08	0.00	-0.01	-0.10	0.09	-0.03	0.01
50	0.26	-0.04	-0.13	0.12	0.19	0.25	0.22	-0.01	0.19	0.27	-0.13	-0.02	-0.06	0.04	0.23	0.06	0.03
51	0.18	0.00	0.10	0.14	0.17	0.10	0.09	0.18	0.10	0.00	0.18	0.22	0.17	-0.01	0.11	0.08	-0.09
52	0.33	0.02	0.20	0.27	0.23	0.40	0.27	0.25	0.35	0.08	0.13	0.27	0.14	0.16	0.34	0.22	0.14
53	0.12	-0.04	-0.04	0.09	0.20	0.10	0.09	-0.01	0.12	0.86	-0.05	-0.04	-0.05	0.11	0.16	-0.01	0.07
54	0.39	0.09	0.08	0.26	0.28	0.38	0.34	0.21	0.30	0.17	-0.02	0.10	-0.03	0.10	0.35	0.14	0.09
55	0.20	0.17	0.11	0.11	0.09	0.25	0.26	0.07	0.23	0.33	0.01	0.08	0.04	0.12	0.39	-0.02	0.23
56	0.38	0.21	0.16	0.20	0.17	0.41	0.28	0.15	0.37	-0.02	0.08	0.15	0.08	0.05	0.38	0.10	0.13
57	0.35	-0.06	0.38	0.20	0.20	0.26	0.26	0.25	0.41	0.06	0.33	0.32	0.25	0.41	0.25	0.23	-0.02
58	0.45	0.09	0.43	0.25	0.24	0.46	0.24	0.36	0.35	-0.03	0.28	0.31	0.26	0.23	0.27	0.28	0.09
59	0.20	-0.07	0.30	0.20	0.28	0.28	0.23	0.24	0.34	0.00	0.46	0.53	0.45	0.24	0.25	0.29	0.06
60	0.19	-0.02	0.14	0.23	0.24	0.15	0.21	0.07	0.34	0.03	0.29	0.34	0.29	-0.04	0.24	0.07	0.05
61	0.18	-0.04	-0.04	0.20	0.28	0.10	0.23	0.06	0.29	0.09	0.21	0.25	0.17	0.12	0.28	0.17	0.03
62	0.47	0.06	0.34	0.23	0.19	0.48	0.34	0.30	0.42	-0.01	0.25	0.33	0.27	0.22	0.35	0.31	0.08
63	0.09	-0.12	0.05	0.12	-0.02	0.03	0.05	0.14	0.07	-0.07	0.17	0.17	0.18	0.01	0.02	0.08	0.00
64	0.47	0.04	0.14	0.18	0.22	0.45	0.21	0.47	0.17	0.06	-0.04	0.04	0.02	0.10	0.19	0.15	0.09
65	0.12	0.07	0.13	0.08	0.04	0.18	0.13	0.08	0.25	0.08	0.08	0.07	0.05	0.08	0.18	0.10	0.11
66	0.33	0.11	0.20	0.21	0.19	0.28	0.41	0.17	0.44	0.21	0.22	0.23	0.22	0.16	0.48	0.17	0.14
67	0.25	0.08	0.15	0.09	0.04	0.16	0.28	0.08	0.32	0.32	0.11	0.11	0.07	0.20	0.37	0.04	0.11
68	0.32	-0.11	-0.04	0.18	0.20	0.14	0.16	0.17	0.27	0.22	0.01	0.03	0.04	0.03	0.17	-0.01	0.06
69	-0.11	-0.23	-0.04	0.06	0.04	-0.20	-0.04	-0.05	0.09	-0.10	0.21	0.19	0.25	0.02	-0.05	0.10	-0.08
70	0.12	-0.08	0.16	0.10	0.11	0.22	0.04	0.16	0.15	0.02	0.23	0.23	0.23	0.25	0.05	0.29	-0.12
71	-0.05	-0.23	0.02	0.01	0.02	-0.09	-0.05	0.03	0.11	-0.08	0.19	0.18	0.23	0.03	-0.05	0.15	-0.04
72	0.47	0.09	0.23	0.19	0.22	0.51	0.23	0.54	0.20	0.02	0.03	0.06	0.02	0.23	0.25	0.19	0.16
73	0.19	0.13	0.52	0.07	0.11	0.22	0.19	0.25	0.28	0.07	0.20	0.27	0.16	0.32	0.21	0.13	0.05
74	0.14	0.32	0.13	-0.06	0.07	0.20	0.12	0.07	0.05	0.11	0.10	0.10	0.09	0.13	0.15	0.16	0.27

		URBAN UNWEIGHTED GOAL SATISFACTION -DUGS																4	
	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
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46																		
47																		
48	-0.03																	
49	0.10	0.19																
50	0.19	0.05	0.27															
51	0.08	-0.02	-0.03	-0.06														
52	0.26	0.23	0.40	0.25	0.07													
53	0.12	-0.04	0.11	0.30	-0.05	0.05												
54	0.32	0.02	0.34	0.40	0.09	0.42	0.18											
55	0.16	-0.10	-0.05	0.04	-0.04	0.13	0.27	0.20										
56	0.31	0.02	0.08	0.23	0.04	0.20	-0.03	0.33	0.23									
57	0.09	0.34	-0.04	0.09	0.10	0.16	0.01	0.06	0.06	0.20								
58	0.22	0.18	-0.12	-0.05	0.16	0.24	-0.12	0.11	0.15	0.24	0.41							
59	0.16	0.25	0.02	0.08	0.13	0.31	-0.06	0.21	0.05	0.23	0.42	0.34						
60	0.22	0.16	0.17	0.12	0.11	0.27	0.03	0.26	0.04	0.22	0.20	0.26	0.36					
61	0.12	0.12	0.09	0.25	0.00	0.18	0.12	0.27	0.04	0.13	0.26	0.13	0.30	0.16				
62	0.30	0.21	0.09	0.18	0.03	0.33	-0.06	0.19	0.08	0.31	0.42	0.65	0.41	0.26	0.15			
63	-0.09	0.39	0.06	-0.07	0.08	0.10	-0.08	-0.06	-0.07	-0.08	0.11	0.13	0.09	0.08	0.01	0.13		
64	0.22	0.15	0.15	0.28	0.19	0.30	0.05	0.38	0.02	0.16	0.08	0.26	0.08	0.01	0.12	0.29	0.14	
65	0.21	0.09	0.03	0.03	0.06	0.10	0.06	0.06	0.04	0.16	0.11	0.11	0.06	0.05	0.08	0.16	0.06	0.04
66	0.32	0.09	0.04	0.16	0.07	0.24	0.18	0.19	0.41	0.27	0.25	0.23	0.27	0.21	0.18	0.26	-0.02	0.00
67	0.24	0.03	-0.01	0.09	0.03	0.09	0.28	0.05	0.51	0.24	0.18	0.17	0.11	0.09	0.03	0.17	-0.02	-0.08
68	0.11	0.13	0.15	0.32	0.07	0.20	0.21	0.20	0.03	0.12	0.14	0.06	0.06	0.08	0.21	0.10	0.11	0.16
69	-0.13	0.18	-0.03	-0.12	-0.05	-0.11	-0.12	-0.37	-0.09	-0.10	0.20	0.06	0.14	-0.07	0.10	0.04	0.19	-0.25
70	0.06	0.27	-0.06	0.14	0.01	-0.01	0.02	0.03	-0.04	0.06	0.28	0.29	0.30	0.08	0.10	0.26	0.14	0.08
71	-0.03	0.21	0.00	-0.12	-0.04	-0.11	-0.09	-0.26	-0.07	-0.04	0.17	0.10	0.17	-0.03	0.06	0.09	0.13	-0.17
72	0.18	0.17	0.08	0.17	0.17	0.29	0.01	0.35	0.06	0.18	0.13	0.33	0.08	0.03	0.05	0.30	0.08	0.72
73	0.29	0.15	-0.05	-0.03	0.14	0.22	0.00	0.17	0.16	0.21	0.29	0.20	0.23	0.13	0.03	0.21	-0.03	0.15
74	0.11	-0.02	0.03	0.10	0.02	0.14	0.04	0.08	0.13	0.11	0.10	0.12	0.10	0.05	0.06	0.15	-0.12	0.02

	URBAN UNWEIGHTED GOAL SATISFACTION -DUGS											5
	65	66	67	68	69	70	71	72	73	74		
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66	0.11											
67	0.03	0.74										
68	-0.16	0.27	0.18									
69	0.07	0.07	0.07	0.03								
70	-0.02	0.15	0.09	0.04	0.36							
71	0.07	0.08	0.06	0.00	0.79	0.40						
72	0.13	0.09	0.02	0.10	-0.23	0.07	-0.14					
73	0.10	0.23	0.20	0.05	-0.03	0.17	-0.01	0.15				
74	0.05	0.15	0.10	0.04	-0.05	0.01	-0.02	0.03	0.09			

	RURAL UNWEIGHTED GOAL SATISFACTION -DUGS													1
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	SMEAN(AccessInformation)													
2	SMEAN(AccessToInfluentials)	0.38												
3	SMEAN(AssistingOthers)	0.42	0.38											
4	SMEAN(BeingAtPeace)	0.17	0.25	0.19										
5	SMEAN(Business)	0.21	0.20	0.13	0.24									
6	SMEAN(Character)	0.39	0.24	0.33	0.25	0.16								
7	SMEAN(Children)	0.01	-0.01	0.10	0.09	0.11	0.09							
8	SMEAN(ChildrenAchievements)	0.22	0.19	0.19	0.24	0.14	0.28	0.27						
9	SMEAN(ChildrenBehaviour)	0.18	0.15	0.26	0.21	0.10	0.30	0.21	0.67					
10	SMEAN(ChildrenUpbringing)	0.32	0.18	0.32	0.16	0.10	0.28	0.17	0.44	0.45				
11	SMEAN(Clothing)	0.29	0.28	0.28	0.40	0.32	0.32	0.11	0.24	0.22	0.28			
12	SMEAN(CommunityAssistance)	0.32	0.57	0.37	0.23	0.14	0.21	-0.04	0.26	0.23	0.16	0.27		
13	SMEAN(CommunityDecisions)	0.49	0.50	0.44	0.23	0.25	0.33	0.05	0.25	0.21	0.31	0.31	0.46	
14	SMEAN(CommunityDevelopment	0.40	0.58	0.44	0.25	0.26	0.30	0.03	0.25	0.18	0.25	0.35	0.53	0.66
15	SMEAN(CommunityFestivals)	0.42	0.47	0.50	0.21	0.22	0.37	0.03	0.23	0.22	0.31	0.30	0.55	0.52
16	SMEAN(CommunityOrganisations	0.46	0.48	0.47	0.15	0.17	0.27	0.03	0.22	0.25	0.31	0.31	0.48	0.65
17	SMEAN(ConvenienceGoods)	0.19	0.30	0.26	0.36	0.27	0.20	0.09	0.11	0.10	0.13	0.46	0.23	0.26
18	SMEAN(EducationalInstitutes)	0.44	0.33	0.42	0.13	0.21	0.31	0.07	0.19	0.17	0.34	0.31	0.33	0.36
19	SMEAN(Educationfamily)	0.35	0.20	0.21	0.03	0.12	0.27	0.09	0.30	0.24	0.44	0.29	0.23	0.31
20	SMEAN(EducationSelf)	0.31	0.18	0.14	0.18	0.22	0.19	0.07	0.06	0.10	0.13	0.26	0.22	0.18
21	SMEAN(Electricity)	0.09	0.18	0.14	0.31	0.22	0.17	0.06	0.06	0.05	-0.04	0.41	0.14	0.17
22	SMEAN(Equipment)	0.06	0.16	0.07	0.21	0.15	0.03	0.09	0.08	0.06	0.07	0.12	0.14	0.10
23	SMEAN(FamilyHardworking)	0.27	0.15	0.28	0.22	0.10	0.37	-0.01	0.26	0.31	0.26	0.24	0.22	0.25
24	SMEAN(FamilyObligations)	0.22	0.35	0.34	0.47	0.24	0.34	0.09	0.15	0.22	0.17	0.38	0.33	0.38
25	SMEAN(FamilyRelations)	0.26	0.26	0.29	0.30	0.11	0.36	0.19	0.25	0.32	0.27	0.26	0.25	0.36
26	SMEAN(FamilyReputation)	0.43	0.46	0.45	0.20	0.16	0.30	0.11	0.28	0.30	0.32	0.38	0.47	0.54
27	SMEAN(FamilyRespect)	0.42	0.45	0.50	0.21	0.16	0.37	0.09	0.30	0.32	0.31	0.37	0.46	0.56
28	SMEAN(FamilyWorkSkills)	0.39	0.20	0.27	0.11	0.08	0.30	0.02	0.30	0.28	0.34	0.27	0.25	0.40
29	SMEAN(Food)	0.24	0.22	0.23	0.34	0.24	0.23	0.10	0.26	0.25	0.31	0.83	0.24	0.25
30	SMEAN(FoodProduction)	0.21	0.30	0.21	0.29	0.13	0.13	0.12	0.09	0.09	0.12	0.32	0.24	0.21
31	SMEAN(Friendships)	0.41	0.30	0.46	0.17	0.06	0.33	-0.04	0.23	0.24	0.26	0.17	0.42	0.47
32	SMEAN(HealthFamilyMembers)	0.34	0.11	0.22	0.28	0.16	0.33	0.10	0.22	0.22	0.24	0.26	0.16	0.27
33	SMEAN(HealthSelf)	0.16	0.11	0.14	0.33	0.24	0.19	0.01	0.10	0.12	0.12	0.19	0.22	0.19
34	SMEAN(HouseholdGoods)	0.29	0.34	0.21	0.35	0.29	0.28	0.12	0.18	0.15	0.15	0.58	0.26	0.32
35	SMEAN(HouseOwnership)	0.39	0.29	0.28	0.37	0.25	0.32	0.08	0.21	0.19	0.28	0.48	0.23	0.32
36	SMEAN(Housing)	0.26	0.32	0.24	0.34	0.30	0.28	0.18	0.25	0.18	0.23	0.61	0.21	0.25
37	SMEAN(IncomeHousehold)	0.26	0.21	0.20	0.39	0.43	0.27	0.03	0.20	0.19	0.24	0.54	0.14	0.24
38	SMEAN(IncomePersonal)	0.02	0.05	0.12	0.01	0.00	-0.03	0.00	0.01	-0.01	0.12	0.10	0.00	0.06
39	SMEAN(InLawsDecisions)	0.30	0.34	0.37	0.36	0.23	0.32	0.22	0.31	0.30	0.27	0.32	0.32	0.38
40	SMEAN(InLawsRespect)	0.33	0.34	0.40	0.32	0.21	0.40	0.14	0.29	0.28	0.23	0.32	0.40	0.38
41	SMEAN(InLawsSupportHelp)	0.27	0.24	0.34	0.35	0.20	0.29	0.19	0.24	0.23	0.26	0.31	0.30	0.28
42	SMEAN(KnowledgeAndSkills)	0.47	0.21	0.35	0.15	0.11	0.28	-0.06	0.05	0.05	0.16	0.22	0.22	0.42
43	SMEAN(LandHoldings)	0.19	0.24	0.18	0.40	0.24	0.18	0.07	0.14	0.11	0.20	0.51	0.20	0.23
44	SMEAN(Leaders)	0.35	0.56	0.33	0.20	0.18	0.34	0.06	0.26	0.19	0.21	0.35	0.40	0.41
45	SMEAN(Livestock)	0.15	0.26	0.22	0.25	0.24	0.11	0.07	0.11	0.03	0.08	0.30	0.29	0.25
46	SMEAN(Loans)	0.02	-0.03	0.05	0.11	0.21	-0.01	0.17	-0.08	-0.05	-0.03	0.14	-0.10	0.00
47	SMEAN(LocalityClean)	0.35	0.41	0.33	0.22	0.10	0.37	0.17	0.21	0.27	0.24	0.36	0.36	0.42
48	SMEAN(LocalitySafe)	0.29	0.26	0.26	0.14	0.10	0.24	0.02	0.12	0.15	0.16	0.22	0.27	0.28
49	SMEAN(Markets)	0.48	0.27	0.41	0.11	0.06	0.37	0.11	0.25	0.26	0.29	0.25	0.29	0.37
50	SMEAN(Marriages)	0.21	0.10	0.16	0.21	0.12	0.19	0.10	0.26	0.17	0.26	0.21	0.12	0.21
51	SMEAN(NeighbourhoodRelations	0.44	0.41	0.38	0.20	0.22	0.31	0.10	0.32	0.34	0.34	0.31	0.45	0.44
52	SMEAN(OccupationalSuccess)	0.02	0.16	0.22	0.21	-0.03	0.07	-0.08	0.12	0.07	0.03	0.05	0.23	0.14
53	SMEAN(PersonalRespect)	0.46	0.40	0.64	0.21	0.15	0.41	0.05	0.28	0.26	0.24	0.35	0.45	0.55
54	SMEAN(PersonalWealth)	0.26	0.31	0.20	0.34	0.19	0.18	-0.05	0.09	0.08	0.14	0.24	0.29	0.25
55	SMEAN(Phone)	0.26	0.28	0.18	0.33	0.26	0.25	0.06	0.12	0.11	0.17	0.47	0.17	0.31
56	SMEAN(PhysicalAppearance)	0.36	0.23	0.28	0.24	0.19	0.31	0.09	0.20	0.16	0.16	0.24	0.20	0.30
57	SMEAN(Recreation)	0.33	0.29	0.23	0.32	0.19	0.30	0.09	0.22	0.19	0.21	0.41	0.29	0.32
58	SMEAN(RelationsHusband)	0.27	0.23	0.25	0.38	0.10	0.39	0.20	0.28	0.29	0.20	0.27	0.20	0.28
59	SMEAN(RelationsNatal)	0.33	0.27	0.31	0.18	0.02	0.28	0.08	0.22	0.26	0.29	0.25	0.28	0.27
60	SMEAN(Religion)	0.21	0.28	0.24	0.26	0.09	0.54	0.08	0.25	0.35	0.25	0.32	0.22	0.19
61	SMEAN(Rest)	0.29	0.24	0.23	0.33	0.16	0.29	0.06	0.27	0.31	0.23	0.45	0.23	0.33
62	SMEAN(RoadsAndTransport)	0.35	0.29	0.35	0.16	0.14	0.35	0.12	0.17	0.15	0.14	0.23	0.28	0.30
63	SMEAN(SafeWater)	0.00	0.02	0.03	0.20	0.17	0.04	0.03	0.07	0.03	0.01	0.39	0.13	0.05
64	SMEAN(SalariedJob)	0.12	0.11	0.05	0.08	0.26	0.02	-0.02	0.08	0.01	0.07	0.19	0.08	0.11
65	SMEAN(SavingsHousehold)	0.08	0.27	0.16	0.27	0.23	0.11	0.05	0.09	-0.01	0.14	0.35	0.20	0.16
66	SMEAN(SavingsPersonal)	0.21	0.22	0.13	0.24	0.19	0.13	0.03	0.06	0.03	0.18	0.28	0.20	0.21
67	SMEAN(SelfEmployment)	0.30	0.07	0.11	0.27	0.35	0.21	0.12	0.11	0.13	0.17	0.24	0.03	0.25
68	SMEAN(ServicesGovt)	0.41	0.24	0.36	-0.01	0.11	0.20	-0.11	0.21	0.18	0.23	0.22	0.28	0.33
69	SMEAN(ServicesHealth)	0.37	0.24	0.39	0.06	0.19	0.15	-0.02	0.18	0.15	0.27	0.34	0.29	0.30
70	SMEAN(ServicesNGO)	0.12	0.09	0.18	0.16	0.21	0.16	0.04	0.08	0.13	0.06	0.18	0.08	0.06
71	SMEAN(Toilet)	0.26	0.23	0.18	0.30	0.21	0.18	0.07	0.11	0.11	0.15	0.49	0.26	0.22
72	SMEAN(TrustworthyFriend)	0.36	0.23	0.46	0.07	0.04	0.30	0.05	0.16	0.15	0.23	0.21	0.32	0.42
73	SMEAN(Vehicle)	0.07	0.10	0.16	0.14	0.10	0.04	0.03	0.08	0.04	0.11	0.19	0.16	0.10

r. > | .10| has p < .05; r. > | .20| has p. <.01. (Two-tailed). N=399

		RURAL UNWEIGHTED GOAL SATISFACTION -DUGS																2
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
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10																		
11																		
12																		
13																		
14																		
15	0.54																	
16	0.58	0.60																
17	0.35	0.24	0.25															
18	0.36	0.39	0.47	0.27														
19	0.35	0.23	0.28	0.16	0.31													
20	0.22	0.28	0.26	0.16	0.27	0.31												
21	0.22	0.20	0.15	0.35	0.10	-0.02	0.17											
22	0.19	0.10	0.06	0.28	0.06	0.08	0.11	0.13										
23	0.15	0.32	0.25	0.14	0.35	0.22	0.10	0.12	0.06									
24	0.41	0.35	0.27	0.39	0.21	0.14	0.19	0.24	0.14	0.26								
25	0.31	0.30	0.32	0.14	0.28	0.21	0.21	0.13	0.09	0.25	0.40							
26	0.50	0.58	0.54	0.30	0.41	0.38	0.27	0.20	0.11	0.35	0.32	0.34						
27	0.56	0.60	0.55	0.25	0.37	0.33	0.22	0.22	0.09	0.35	0.31	0.34	0.77					
28	0.29	0.28	0.38	0.14	0.33	0.44	-0.03	-0.01	0.08	0.50	0.18	0.21	0.36	0.34				
29	0.30	0.30	0.26	0.42	0.26	0.27	0.24	0.33	0.16	0.25	0.34	0.22	0.34	0.32	0.27			
30	0.32	0.15	0.16	0.42	0.20	0.19	0.23	0.16	0.42	0.21	0.24	0.13	0.24	0.25	0.10	0.31		
31	0.40	0.39	0.42	0.11	0.36	0.29	0.15	0.09	0.11	0.24	0.25	0.29	0.38	0.41	0.32	0.15	0.01	
32	0.23	0.24	0.27	0.23	0.27	0.26	0.19	0.12	0.12	0.29	0.31	0.22	0.30	0.26	0.37	0.25	0.10	
33	0.21	0.17	0.15	0.28	0.22	0.11	0.19	0.15	0.11	0.27	0.32	0.14	0.22	0.20	0.14	0.14	0.20	
34	0.38	0.29	0.32	0.57	0.30	0.16	0.18	0.42	0.20	0.19	0.36	0.15	0.30	0.38	0.18	0.50	0.44	
35	0.37	0.30	0.28	0.47	0.36	0.33	0.30	0.29	0.31	0.33	0.37	0.28	0.39	0.40	0.28	0.46	0.40	
36	0.34	0.23	0.22	0.47	0.22	0.31	0.25	0.33	0.18	0.18	0.36	0.19	0.28	0.30	0.24	0.56	0.43	
37	0.30	0.24	0.21	0.48	0.27	0.24	0.23	0.32	0.25	0.24	0.25	0.18	0.28	0.28	0.24	0.50	0.45	
38	0.05	0.08	0.05	0.11	0.06	0.13	0.12	0.05	0.10	-0.04	0.08	-0.04	0.03	0.08	0.08	0.13	0.07	
39	0.35	0.35	0.38	0.23	0.30	0.26	0.24	0.16	0.15	0.32	0.40	0.39	0.36	0.32	0.27	0.27	0.16	
40	0.42	0.47	0.43	0.22	0.30	0.25	0.24	0.18	0.09	0.39	0.44	0.43	0.43	0.44	0.26	0.26	0.19	
41	0.37	0.31	0.29	0.22	0.30	0.21	0.26	0.20	0.17	0.27	0.33	0.47	0.28	0.28	0.20	0.22	0.21	
42	0.34	0.27	0.35	0.28	0.33	0.17	0.17	0.12	0.15	0.31	0.14	0.15	0.30	0.30	0.36	0.21	0.23	
43	0.29	0.22	0.24	0.53	0.21	0.19	0.22	0.32	0.33	0.30	0.40	0.17	0.27	0.26	0.20	0.51	0.44	
44	0.43	0.36	0.41	0.23	0.39	0.26	0.16	0.26	0.07	0.19	0.24	0.31	0.39	0.43	0.21	0.26	0.19	
45	0.35	0.29	0.22	0.33	0.26	0.13	0.27	0.25	0.52	0.22	0.27	0.14	0.32	0.31	0.11	0.32	0.47	
46	0.05	-0.02	-0.06	0.06	0.00	0.02	0.09	0.14	0.07	-0.01	0.07	0.02	-0.07	-0.02	-0.03	0.11	0.12	
47	0.41	0.38	0.40	0.31	0.40	0.34	0.24	0.17	0.07	0.32	0.35	0.34	0.41	0.43	0.37	0.36	0.25	
48	0.29	0.24	0.33	0.14	0.33	0.25	0.14	0.18	0.06	0.15	0.20	0.32	0.32	0.30	0.27	0.15	0.13	
49	0.27	0.40	0.42	0.14	0.59	0.22	0.17	0.09	0.08	0.39	0.22	0.36	0.38	0.35	0.36	0.26	0.12	
50	0.12	0.13	0.14	0.19	0.09	0.16	0.12	0.06	0.04	0.08	0.17	0.20	0.10	0.08	0.10	0.15	0.07	
51	0.38	0.50	0.50	0.16	0.38	0.34	0.29	0.15	0.09	0.33	0.29	0.37	0.65	0.58	0.37	0.27	0.12	
52	0.16	0.17	0.11	0.21	0.12	-0.08	0.04	0.13	0.19	0.22	0.12	0.02	0.14	0.09	0.04	0.06	0.10	
53	0.53	0.59	0.57	0.19	0.46	0.25	0.20	0.17	0.09	0.39	0.32	0.35	0.61	0.64	0.36	0.30	0.18	
54	0.30	0.28	0.21	0.41	0.28	0.05	0.15	0.16	0.25	0.18	0.28	0.11	0.23	0.19	0.18	0.32	0.31	
55	0.35	0.23	0.28	0.55	0.20	0.23	0.22	0.27	0.25	0.14	0.39	0.22	0.30	0.31	0.18	0.45	0.38	
56	0.27	0.30	0.38	0.22	0.30	0.22	0.19	0.09	0.15	0.29	0.24	0.30	0.28	0.30	0.36	0.22	0.22	
57	0.35	0.27	0.30	0.34	0.30	0.22	0.25	0.20	0.18	0.19	0.41	0.24	0.37	0.40	0.23	0.34	0.34	
58	0.25	0.27	0.23	0.16	0.24	0.18	0.14	0.18	0.17	0.28	0.43	0.49	0.29	0.25	0.25	0.23	0.22	
59	0.27	0.22	0.30	0.20	0.35	0.23	0.20	0.09	0.02	0.20	0.28	0.35	0.33	0.35	0.25	0.19	0.14	
60	0.28	0.29	0.21	0.29	0.31	0.33	0.24	0.18	0.11	0.32	0.39	0.37	0.26	0.31	0.25	0.22	0.18	
61	0.29	0.25	0.33	0.32	0.28	0.22	0.11	0.21	0.06	0.34	0.41	0.33	0.37	0.44	0.37	0.42	0.16	
62	0.25	0.35	0.35	0.13	0.48	0.21	0.09	0.18	0.01	0.29	0.24	0.29	0.33	0.32	0.32	0.19	0.08	
63	0.13	0.08	0.03	0.33	0.11	0.07	0.09	0.31	0.19	0.07	0.24	0.03	0.06	0.06	0.03	0.36	0.30	
64	0.21	0.09	0.09	0.24	0.11	0.21	0.13	0.09	0.06	0.05	0.12	0.00	0.18	0.18	0.03	0.14	0.16	
65	0.31	0.15	0.15	0.46	0.22	0.15	0.12	0.22	0.25	0.09	0.27	0.03	0.21	0.17	0.11	0.33	0.31	
66	0.19	0.20	0.20	0.33	0.27	0.11	0.13	0.24	0.19	0.14	0.20	0.08	0.17	0.12	0.18	0.28	0.18	
67	0.15	0.14	0.19	0.21	0.18	0.15	0.14	0.12	0.25	0.20	0.25	0.15	0.21	0.17	0.21	0.21	0.22	
68	0.36	0.29	0.36	0.17	0.43	0.31	0.20	0.04	0.11	0.24	0.16	0.13	0.24	0.25	0.25	0.25	0.19	
69	0.38	0.32	0.38	0.24	0.52	0.30	0.19	0.12	0.09	0.29	0.14	0.12	0.33	0.36	0.25	0.32	0.32	
70	0.17	0.10	0.11	0.21	0.10	0.04	-0.01	0.18	-0.01	0.08	0.08	0.01	-0.01	0.00	0.09	0.10	0.09	
71	0.27	0.23	0.20	0.43	0.22	0.16	0.22	0.45	0.18	0.14	0.32	0.10	0.23	0.24	0.11	0.46	0.37	
72	0.34	0.30	0.37	0.11	0.29	0.26	0.07	0.01	0.04	0.19	0.17	0.20	0.33	0.36	0.32	0.13	0.08	
73	0.19	0.10	0.07	0.28	0.20	0.08	0.14	0.13	0.29	0.18	0.07	-0.03	0.11	0.06	0.09	0.22	0.23	

		RURAL UNWEIGHTED GOAL SATISFACTION -DUGS																3
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	
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30																		
31																		
32	0.24																	
33	0.08	0.35																
34	0.10	0.26	0.25															
35	0.31	0.29	0.20	0.48														
36	0.13	0.28	0.17	0.55	0.53													
37	0.06	0.29	0.24	0.49	0.42	0.50												
38	0.02	-0.01	-0.03	0.06	0.09	0.08	0.07											
39	0.33	0.35	0.25	0.21	0.33	0.31	0.18	0.02										
40	0.36	0.31	0.18	0.24	0.36	0.29	0.20	0.00	0.61									
41	0.21	0.27	0.23	0.26	0.35	0.25	0.19	0.04	0.58	0.56								
42	0.28	0.24	0.21	0.13	0.30	0.15	0.24	0.05	0.21	0.23	0.19							
43	0.10	0.19	0.23	0.45	0.62	0.54	0.47	0.08	0.29	0.30	0.29	0.23						
44	0.31	0.17	0.15	0.31	0.27	0.32	0.24	0.00	0.24	0.34	0.21	0.21	0.17					
45	0.17	0.13	0.20	0.31	0.40	0.31	0.31	0.09	0.19	0.24	0.24	0.28	0.38	0.21				
46	-0.09	0.12	0.04	0.11	0.09	0.15	0.20	0.26	0.04	0.01	0.09	0.00	0.00	0.01	0.12			
47	0.34	0.27	0.15	0.35	0.41	0.38	0.23	0.03	0.34	0.31	0.27	0.28	0.24	0.39	0.18	-0.03		
48	0.26	0.23	0.12	0.18	0.24	0.23	0.20	-0.11	0.25	0.29	0.24	0.22	0.11	0.39	0.12	-0.02	0.42	
49	0.41	0.31	0.17	0.22	0.34	0.17	0.09	-0.02	0.33	0.33	0.35	0.34	0.10	0.31	0.20	-0.01	0.46	
50	0.15	0.23	0.05	0.19	0.21	0.16	0.10	0.02	0.19	0.20	0.21	0.10	0.17	0.08	-0.01	0.02	0.07	
51	0.49	0.25	0.17	0.23	0.36	0.25	0.26	0.00	0.38	0.39	0.30	0.26	0.19	0.39	0.21	-0.04	0.41	
52	0.29	0.00	0.10	0.03	0.13	-0.01	0.00	0.01	0.10	0.10	0.11	0.25	0.12	0.17	0.12	-0.11	0.14	
53	0.45	0.32	0.18	0.29	0.33	0.26	0.21	0.06	0.38	0.51	0.32	0.37	0.21	0.38	0.28	-0.01	0.37	
54	0.22	0.09	0.17	0.31	0.37	0.26	0.27	0.14	0.16	0.15	0.18	0.35	0.33	0.17	0.41	0.00	0.30	
55	0.08	0.26	0.22	0.48	0.41	0.42	0.45	0.10	0.26	0.23	0.22	0.24	0.36	0.24	0.28	0.10	0.32	
56	0.34	0.33	0.15	0.25	0.30	0.22	0.26	0.00	0.34	0.27	0.27	0.27	0.19	0.23	0.22	0.06	0.39	
57	0.26	0.29	0.27	0.45	0.42	0.35	0.37	0.00	0.27	0.25	0.27	0.23	0.40	0.31	0.25	-0.01	0.40	
58	0.23	0.28	0.16	0.22	0.29	0.26	0.24	-0.13	0.37	0.47	0.36	0.15	0.24	0.33	0.22	0.01	0.26	
59	0.34	0.18	0.10	0.18	0.35	0.18	0.15	-0.06	0.25	0.32	0.23	0.20	0.18	0.35	0.11	-0.01	0.31	
60	0.21	0.21	0.15	0.30	0.33	0.29	0.21	0.02	0.26	0.35	0.27	0.15	0.23	0.29	0.13	-0.05	0.43	
61	0.33	0.31	0.27	0.37	0.31	0.31	0.31	0.00	0.32	0.33	0.30	0.22	0.34	0.27	0.14	-0.01	0.43	
62	0.38	0.14	0.20	0.13	0.30	0.19	0.14	0.09	0.30	0.29	0.24	0.25	0.17	0.36	0.12	-0.05	0.43	
63	0.05	0.05	0.12	0.33	0.28	0.37	0.32	0.02	0.12	0.07	0.10	0.01	0.38	0.04	0.33	0.06	0.04	
64	-0.04	0.16	0.13	0.18	0.14	0.20	0.35	0.00	0.10	0.10	0.08	0.08	0.19	0.07	0.08	0.10	0.02	
65	0.10	0.23	0.17	0.34	0.39	0.42	0.41	0.07	0.15	0.12	0.13	0.14	0.44	0.24	0.22	0.11	0.20	
66	0.19	0.17	0.06	0.26	0.28	0.28	0.24	0.17	0.11	0.11	0.13	0.22	0.27	0.20	0.18	0.08	0.21	
67	0.07	0.21	0.16	0.26	0.30	0.26	0.34	-0.05	0.16	0.13	0.16	0.16	0.29	0.05	0.25	0.16	0.18	
68	0.36	0.09	0.14	0.21	0.29	0.16	0.23	0.06	0.10	0.16	0.13	0.28	0.16	0.30	0.17	-0.01	0.29	
69	0.32	0.17	0.14	0.29	0.33	0.27	0.31	0.04	0.14	0.22	0.18	0.27	0.25	0.25	0.27	0.04	0.36	
70	0.12	0.13	0.17	0.21	0.11	0.16	0.12	-0.02	0.07	0.03	0.00	0.09	0.01	0.09	0.00	0.33	0.08	
71	0.12	0.22	0.22	0.52	0.41	0.45	0.43	-0.05	0.22	0.17	0.20	0.09	0.38	0.21	0.32	0.17	0.27	
72	0.55	0.19	0.10	0.15	0.21	0.12	0.11	0.07	0.27	0.24	0.16	0.19	0.03	0.27	0.14	0.06	0.33	
73	0.06	0.09	0.07	0.16	0.21	0.19	0.25	0.10	0.08	0.10	0.14	0.20	0.25	0.08	0.31	0.08	0.14	

		RURAL UNWEIGHTED GOAL SATISFACTION -DUGS															4
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
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48																	
49	0.29																
50	0.12	0.15															
51	0.39	0.37	0.13														
52	0.04	0.19	0.02	0.04													
53	0.34	0.50	0.20	0.46	0.21												
54	0.10	0.27	0.15	0.17	0.23	0.28											
55	0.11	0.17	0.15	0.21	0.01	0.17	0.29										
56	0.22	0.36	0.14	0.33	0.12	0.30	0.20	0.28									
57	0.23	0.27	0.18	0.35	0.10	0.29	0.31	0.39	0.23								
58	0.26	0.26	0.18	0.29	0.08	0.32	0.14	0.18	0.25	0.28							
59	0.27	0.32	0.14	0.37	0.12	0.33	0.09	0.13	0.22	0.27	0.39						
60	0.26	0.29	0.24	0.26	0.06	0.28	0.17	0.23	0.26	0.29	0.36	0.36					
61	0.26	0.31	0.13	0.32	0.08	0.31	0.25	0.33	0.27	0.64	0.30	0.24	0.37				
62	0.34	0.55	0.05	0.33	0.17	0.41	0.24	0.12	0.31	0.25	0.28	0.20	0.24	0.27			
63	0.04	-0.06	0.07	-0.01	-0.05	0.04	0.25	0.23	0.11	0.20	0.13	0.04	0.08	0.14	0.04		
64	0.01	0.00	-0.06	0.13	0.04	0.11	-0.05	0.23	-0.01	0.10	0.06	0.08	-0.01	0.11	-0.03	-0.02	
65	0.12	0.05	0.12	0.14	0.19	0.14	0.33	0.31	0.10	0.27	0.11	0.11	0.14	0.19	0.09	0.24	0.23
66	0.09	0.24	0.16	0.17	0.26	0.17	0.44	0.20	0.18	0.21	0.12	0.07	0.06	0.21	0.22	0.15	0.06
67	0.10	0.12	0.16	0.23	-0.05	0.18	0.13	0.24	0.27	0.21	0.22	0.13	0.19	0.19	0.09	0.10	0.15
68	0.22	0.44	0.12	0.25	0.20	0.36	0.24	0.17	0.19	0.26	0.14	0.20	0.19	0.24	0.39	0.06	0.13
69	0.21	0.47	0.07	0.27	0.14	0.35	0.25	0.24	0.22	0.34	0.10	0.19	0.16	0.29	0.33	0.12	0.16
70	0.09	0.12	0.07	0.01	0.16	0.10	0.11	0.08	0.08	0.12	0.03	-0.06	0.07	0.10	0.16	0.10	0.06
71	0.20	0.13	0.10	0.20	0.01	0.16	0.27	0.43	0.14	0.37	0.19	0.21	0.19	0.28	0.10	0.45	0.09
72	0.26	0.27	0.19	0.35	0.12	0.44	0.13	0.15	0.29	0.17	0.20	0.29	0.19	0.19	0.32	-0.03	0.00
73	0.05	0.17	0.11	0.08	0.29	0.13	0.31	0.18	0.10	0.14	0.04	0.09	0.09	0.12	0.06	0.16	0.05

		RURAL UNWEIGHTED GOAL SATISFACTION -DUGS											5
	65	66	67	68	69	70	71	72	73	74			
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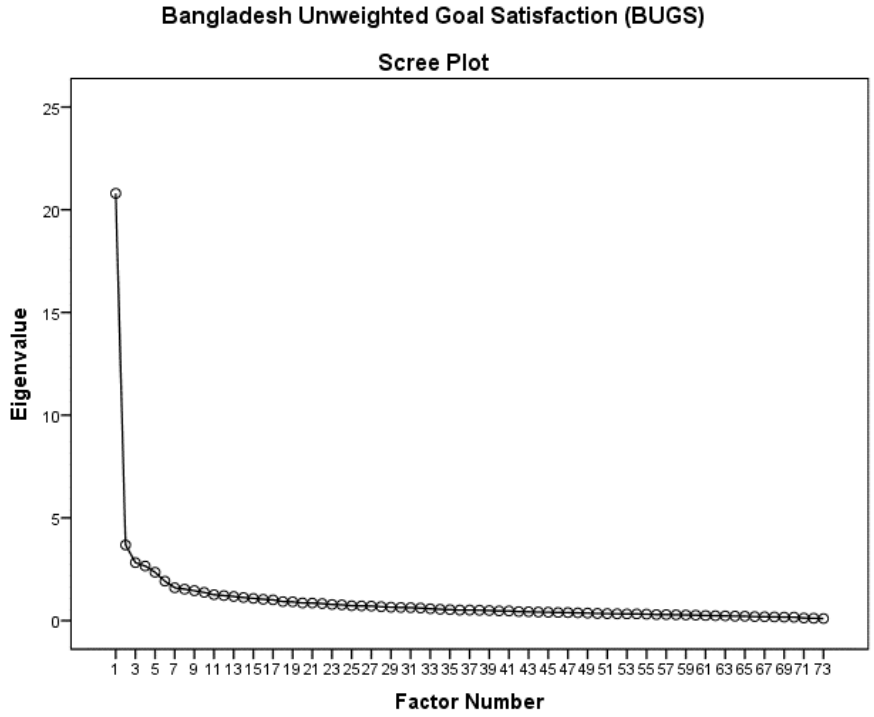
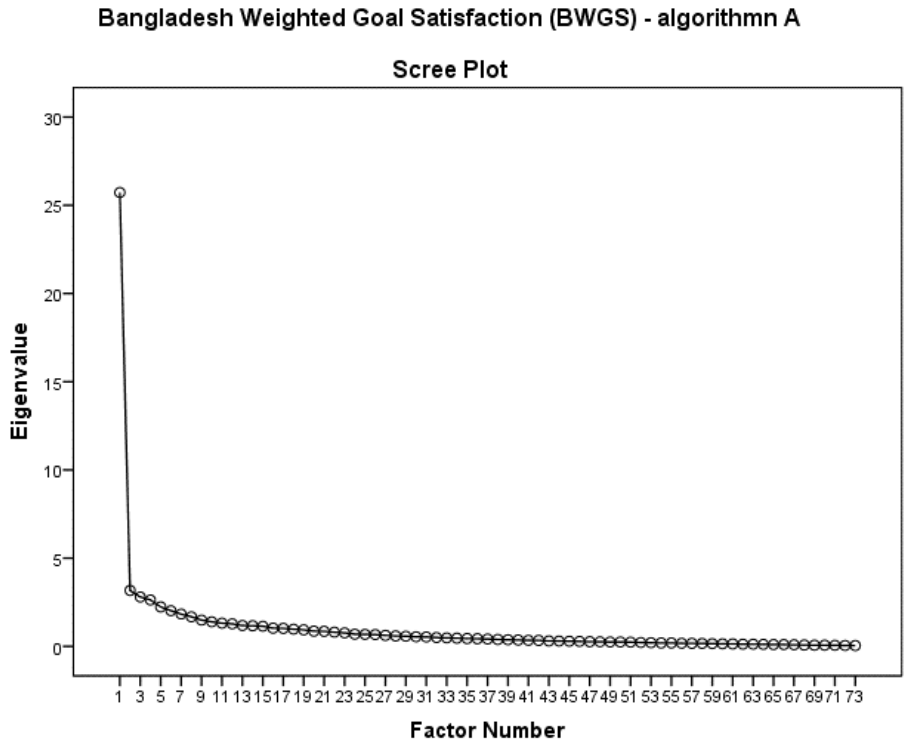
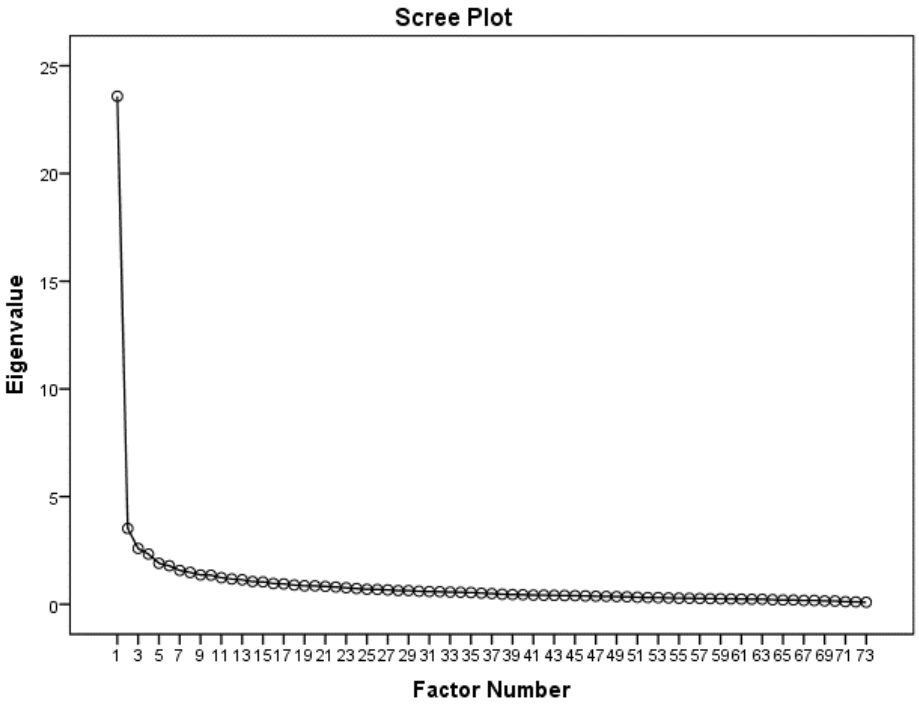
64													
65													
66	0.53												
67	0.13	0.06											
68	0.19	0.28	0.02										
69	0.27	0.22	0.13	0.60									
70	0.16	0.21	0.08	0.32	0.24								
71	0.31	0.17	0.24	0.13	0.27	0.19							
72	0.06	0.12	0.18	0.35	0.31	0.16	0.14						
73	0.30	0.37	0.06	0.20	0.21	0.02	0.21	0.06					

N. SCREE PLOTS

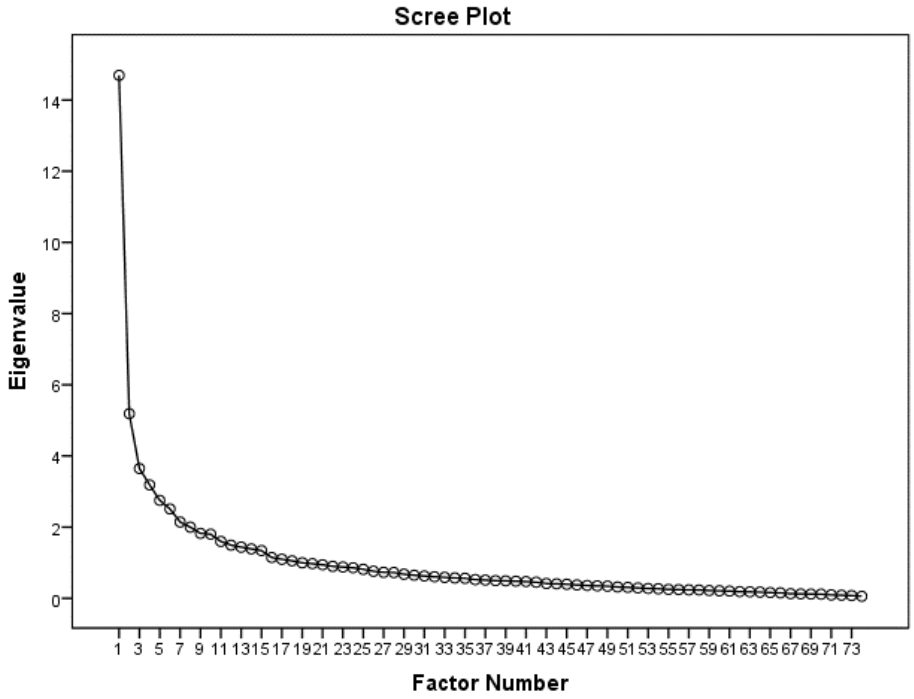


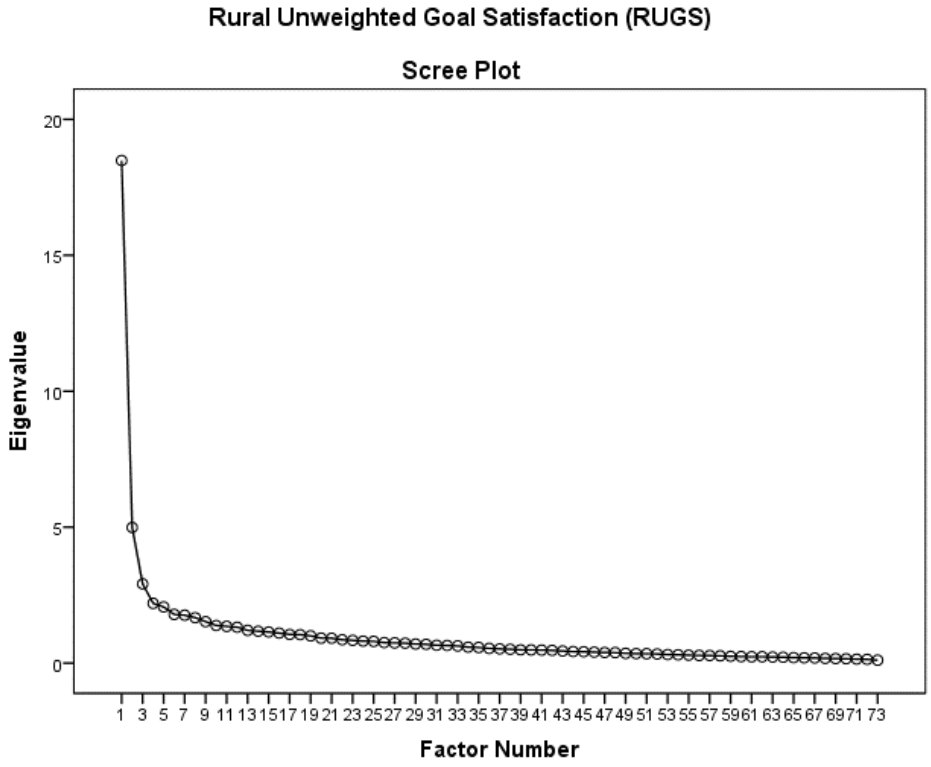


Bangladesh Weighted Goal Satisfaction (BWGS) -Algorithmn B



Dhaka Unweighted Goal Satisfaction (DUGS)




Rural Unweighted Goal Satisfaction (RUGS)
Scree Plot
Eigenvalue
20
15
10
5
0
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73
Factor Number